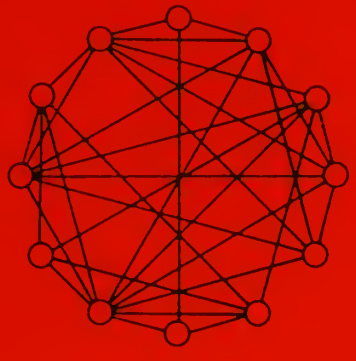

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CALIFORNIA MANAGEMENT STUDY -- SUPPLEMENT

CALIFORNIA PROGRAM HIGHLIGHTS

UNITED STATES DEPARTMENT OF THE INTERIOR· · ··BUREAU OF LAND MANAGEMENT

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BUREAU OF LAND MANAGEMENT

CALIFORNIA MANAGEMENT STUDY SUPPLEMENT

California Program Data and Analysis

Introduction	Page	1
1. Lands Program		5
2. Minerals Program		20
3. Recreation Program		26
4. Livestock Program		50
5. Wildlife Program		64
6. Forestry Program		79
7. Watershed Program		95
8. Protection Program		104
9. Cadastral Survey Program		119
10. Roads Program - Access		138
11. Program Development Program		167
12. General Support Program		175

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CALIFORNIA MANAGEMENT STUDY SUPPLEMENT

As time permitted, study and analysis of California data was made by the State staff. In general, the district submissions were viewed from the standpoint of program rather than along the traditional activity lines. A listing of line item inputs is included in the introductory section as they relate by Activity, Work Code and Job to the twelve programs.

The presentation format separated comments into General Highlights and District Differences. Total workload, special problems, conclusions and recommendations on a statewide basis are treated in Part A. The second or Part B is the beginning of studies into specific district programs for purposes of developing a State Program and formulating District Program Guides. Before final markup of district programs are completed, meetings will be held to assure proper program balance and to become aware of all limiting factors which are hampering the rate of work production.

Each program, where applicable, has been graphically analyzed by districts in terms of Resource Data, Operations, and Project Development summaries. The narratives are followed by appropriate graphs, charts or tables.

To reduce the overall volume of the main management study, the in-depth analyses has been separated out as a supplement.

Line Item Inputs by Program

Minerals Program

1110 320 023
1110 331 024
1110 332 025
1110 344 023
1110 344 015
1110 344 028
1210 320 023
1210 320 030
1210 320 026
1210 331 024
1210 332 025
1210 341 026
1210 344 030
1210 344 026
1210 420 034
1210 420 033
1210 420 181
1210 600 026
1400 240 026
1900 110 023
1900 344 023
1210 160 172
1210 210 029
1210 344 023
1900 210 023

Livestock Management Program

1220 210 033
1220 210 181
1220 210 040
1220 210 041
1220 210 046
1220 210 047
1220 210 048
1220 210 044
1220 210 050
1220 220 041
1220 220 046
1220 220 048
1220 230 051
1220 310 053
1220 320 054
1220 410 056
1220 420 058
1220 430 059
1220 430 166
1260 200 088
1260 200 089
1260 520 094
1260 520 169
1260 510 093
1260 530 095
1260 611 099
1260 612 100
1260 613 101
1260 614 102
1260 700 107
1260 700 108
1260 700 109
1260 700 110
1400 340 055
1800 400 052
1220 160 172
1220 420 029
1260 700 179
1220 220 044
1220 240 052
1220 330 055
1220 420 057

Protection Program

1110 130 009
1270 210 113
1270 220 114
1270 230 115
1270 240 116
1270 240 163
1270 311 117
1270 312 118
1270 320 119
1270 330 120
1270 340 040
1270 400 123
1270 510 124
1270 520 125
1270 530 177
1290 130 009
1400 240 114
1700 130 009
1270 160 172

Soil & Watershed Program

1260 200 086
1260 200 087
1260 310 090
1260 310 033
1260 310 181
1260 320 091
1260 320 057
1260 320 050
1260 400 040
1260 520 092
1260 530 096
1260 530 097
1260 540 098
1260 621 103
1260 622 104
1260 623 105
1260 624 106
1400 240 136
1800 600 091
1260 200 182
1260 160 172
1260 320 029

Wildlife Management Program

1220 810 060
1220 810 050
1220 810 033
1220 810 181
1220 820 061
1220 830 062
1220 830 167
1220 830 157
1240 800 060
1240 800 062
1260 811 093
1260 812 095
1260 812 096
1260 813 173
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1260 821 094
1260 821 092
1260 821 169
1260 822 175
1260 831 099
1220 820 029
1260 832 100
1260 833 101
1260 834 170
1260 835 171
1260 840 111
1260 850 176
1900 260 144
1220 810 172

General Support

1110 110 001
1110 111 001
1110 112 001
1110 120 002
1110 120 164
1110 160 004
1110 160 005
1110 200 011
1110 200 012
1110 200 013
1210 111 001
1210 112 001
1210 120 164
1210 200 011
1210 200 012
1210 200 013
1220 120 164
1240 120 164
1250 120 164
1260 120 164
1270 120 164
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1290 111 001
1290 112 001
1290 120 002
1290 150 029
1290 160 004
1290 160 005
1290 160 010
1290 171 164
1400 110 001
1400 120 002
1400 120 133
1400 120 164
1400 160 004
1400 160 132
1700 110 001
1700 111 001
1700 112 001
1700 120 002
1700 120 164
1700 150 029
1700 160 004
1700 160 005
1700 160 010
1800 110 001
1800 120 002
1800 120 164
1800 160 004
1800 160 172
1800 200 011
1900 110 180
1900 290 010
2110 120 002
2110 120 164
2110 160 004
2120 120 002
2120 120 164
2120 160 004
2210 120 002
2210 120 164
2210 160 004
2220 120 002
2220 120 164
2220 160 004
2230 120 002
2230 120 164
2230 160 004
3100 120 002
3100 120 164
3100 160 004
7200 400 159
2110 200 201
2110 200 202
2110 200 203
2110 430 204
2110 430 205
2210 200 211
2210 320 212
2210 320 213
1800 900 162
2110 160 172
2210 160 172

Forestry Program

1240 200 063
1240 200 183
1240 200 069
1240 300 064
1240 300 033
1240 300 181
1240 411 147
1240 411 148
1240 411 050
1240 412 067
1240 413 068
1240 413 070
1240 414 071
1240 415 021
1240 420 072
1240 500 073
1240 610 040
1240 620 074
1240 630 075
1250 210 076
1250 210 033
1250 210 181
1250 220 077
1250 220 078
1250 230 079
1250 311 081
1250 312 082
1250 321 083
1250 322 084
1250 330 085
1250 330 112
1250 400 040
1400 240 050
1400 240 067
1400 240 073
1800 500 064
1240 160 172
1240 610 029
1250 160 172
1250 240 080

Cadastral Survey Program

1400 210 134
1400 210 135
1400 210 140
1400 220 134
1400 220 135
1400 220 140
1400 230 134
1400 230 135
1400 230 140
1400 310 138
1400 310 139
1400 320 138
1400 320 139
1400 330 138
1400 330 139
1400 410 141
1400 420 141
1400 430 141
1800 700 160
1900 400 146
1400 160 172
1400 160 029

Road Program

2230 200 211
2230 310 219
2230 310 220
2230 320 219
2230 320 220
3100 200 301
3100 200 302
3100 200 303
3100 300 050
3100 411 304
3100 411 305
3100 412 304
3100 402 305
3100 420 306
3100 420 307
3100 160 172
2230 160 172

Lands Program

1110 310 014
1110 310 015
1110 310 016
1110 310 017
1110 310 018
1110 310 019
1110 310 020
1110 310 021
1110 310 022
1110 310 168
1110 342 027
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1210 310 014
1210 310 015
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1210 310 019
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1210 344 015
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1210 344 018
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1210 410 181
1210 430 042
1210 430 045
1210 430 049
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1800 300 035
1900 110 017
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1900 210 017
1110 160 172
1110 200 029
1240 413 015
1240 413 016
1240 413 017
1240 413 018
1240 413 019
1240 413 020
1240 413 021

Recreation Program

1210 510 036
1210 520 033
1210 520 037
1210 530 038
1800 900 037
2120 200 206
2120 200 207
2120 200 208
2120 430 209
2120 430 210
2220 200 211
2220 310 214
2220 310 215
2220 320 216
2220 320 217
2220 330 218
2120 160 172
2220 160 172

Program Development

1110 150 003
1290 150 003
1290 171 033
1290 171 128
1290 171 129
1290 172 127
1290 172 130
1290 173 131
1290 171 181
1400 150 003
1700 150 003
1800 150 003
1800 900 033
1900 290 130
2110 150 003
2120 150 003
2210 150 003
2220 150 003
2230 150 003
3100 150 003
7200 400 003

CALIFORNIA MANAGEMENT STUDY

LANDS PROGRAM

A. General Highlights

1. Work Load Totals - The accompanying bargraph "Total Work" and pie chart "Total Work" illustrate the magnitude of the various job, activity and work code components which comprise the total "lands" program as defined for study purposes. The "lands" program alone approximates 21,000 man months of total work.

The substantial portion of the total man months in "lands" involves seven work areas, (1) occupancy, (2) public sales, (3) exchanges, (4) recreation and public purposes, (5) withdrawal jurisdiction transactions, (6) land tenure analysis, and (7) land classification. Each of the above represents a single "job" excepting "land classification", which includes jobs 35, 42, 45, and 49, accounting for multiple use-retention classifications in the respective Type IV, I, II, and III areas and type IV procedures.

Public sales involve one-third of the total lands workload. However, it must be emphasized that the public sale job (as well as jobs 14, 15, 17, 18, 19) as defined in this study, includes both application based and Bureau motion cases, plus supporting components such as minerals evaluation and contests, timber appraisal and, particularly, cadastral survey which singly accounts for 2600 man months under the public sale job.

It is estimated the public sale job may be distorted by approximately 2000 man months. This results from use of the case/man month conversion criteria which represents application based work but does not accurately account for the greater efficiencies obtainable from Bureau motion sales. Completion of URA's and multiple use classifications will assist in earmarking transfer units and accelerate transfer actions.

Occupancy, exchanges, R&PP and withdrawal jurisdiction transactions represent considerable man months and collectively amount to almost half of the total lands program.

Land Tenure Analysis involves work not leading to classification. Increased emphasis in planning functions may require greater allocations to this job.

Classification consists mostly of man months involved in multiple-use retention classifications in Type I, II, III, and IV areas. For study purposes, Bureau motion disposal classifications are represented not on an area concept but on an individual tract-case basis by jobs.

Rights-of-way constitute a sizable annual workload, but since this job is considered to be recurrent, the total workload is reflected only on an average annual level not on a cumulative total.

2. Special Problems - The fundamental problem confronting "lands" is our difficulty in providing a Bureau motion program responsive to the natural resource and land development needs of California, while at the same time maintaining the current program of satisfying individual public demand.

The growth of California has and will create an unprecedented need for recreation, open space, natural resource products, and for new land developments. Only through Bureau initiation can BLM achieve a lands program consistent with the changing and total needs of the State. It is becoming apparent that a responsive Bureau initiative program is imperative and that the on-going system related to satisfaction of applications and individual demand is only a stop-gap measure. Further, a Bureau program permits timely planning and zoning by local communities and enables BLM to carry out its own land acquisition and adjustment program. An effective Bureau initiative program is dependent upon the planning for and magnitude of two fundamental land functions, (1) land exchanges, and (2) land sales.

The sale program, although of greater total magnitude, can be phased over a very long period and need not be continuous in all districts at the same time. The program should, however, be responsive in areas of intensive growth. A Bureau motion sale program would also tend to diminish individual demand in those areas.

Many of the most important public lands throughout the State are in Type II areas, which in the near future, if not properly blocked up, cannot withstand growing land use pressures and cannot effectively satisfy the needs of California. Because of use

pressures exerted by a 20 million population, resulting in the subdividing of private lands and rising real estate prices, a well planned exchange program becomes imperative.

At present, BLM is attempting to exchange with the State of California for numerous strategically located State school lands. Because such exchanges do not necessarily benefit the State lands program, exhaustive preliminary negotiations are required.

It is further necessary to initiate a well planned exchange program in order to satisfy the growing needs of other federal agencies in a consistent manner with BLM land requirements.

An effective Bureau motion program requires sufficient manpower to do the job set out. This means lands and minerals personnel as well as personnel in the supporting activities.

The lands program covers all the support type services of minerals, cadastral, etc., personnel. The charts of total work show a need for coordinated scheduling if the job in occupancy, public sales, etc., is to be done. Further, in implementing the lands program for any particular job it is necessary to earmark specific land areas. The lands program, like other resource programs, should be built on adequate inventories and on an orderly schedule of examination, appraisal and adjudication.

Phasing of jobs also becomes an important factor in long range programming. The individual district programs reveal rapid "tooling up" to pipeline certain jobs by 1974 in accordance with Bureau directives and guides (Re: Occupancy, etc.). Since the several jobs are extremely monumental, the rapid "tooling up" appears in itself unrealistic and presents a problem of constructively utilizing those man months beyond 1974 within the same district or State. In short, the individual district programs require adjustment.

Another serious problem is that related to training. Professional schools, training guides, and manual releases are sorely needed throughout the State to maintain efficiency as well as train new personnel.

The land office activity is of particular significance. With two land offices and the premium on trained adjudication and other land office technicians, it seems essential that the operation be

examined closely to determine whether two land offices are now necessary. Within the next five years there will be a substantial loss in both offices by retirement or otherwise of key personnel. At present, the Bureau does not have an adequate training program to assure that competent replacements will be available when needed.

CALIFORNIA MANAGEMENT STUDY

LANDS PROGRAM

B. Regional Workload Differences

Regional workload differences have been illustrated by charts of major jobs (Jobs 15, 16, 17, 19, and 21) by districts to show total work units as well as the various work codes contributing to the job. The graphs show cases planned in the 1968 AWP, cases programmed in the management study for the period 1969 through 1974, and the work remaining to be done at the end of that period.

In analyzing individual jobs, it is quite apparent that in some districts estimated total work cannot be accomplished over a seven-year period, even with acceleration in manpower. Consideration of related work codes is of major importance. For example, in Job 15, estimated total work consists of 200 cases requiring cadastral survey. However, by 1974, only 90 survey cases are expected to be completed, thus indicating a need for close coordination with district plans.

To develop a State program additional analysis is necessary of individual jobs as well as the formulation of program priorities so that each district is carrying out that program which is responsive to the Bureau's mission in California as well as nationwide. The following analysis of certain jobs illustrates some of the relationships requiring further review.

1. Job 15 - Occupancy - Chart for Job 15 depicts the major workload for this job is concentrated in three district offices. The charts indicate that most offices will complete more than 50% of the trespass action (work code 600) but that legalizing occupancies will fall far short of the estimated total work accomplishment. Support work by 1400-340 will have to be expanded and coordinated with 310 and 600 in order to achieve closure of more cases in this critical job.

Analysis of the charts show apparent differences in the approaches taken on work code 600 cases. For example, note that very few 600 type cases will be legitimized by work code 310 action (small tract accommodations and MCOA) by 04, while on the other hand, a larger number of 600 type cases will probably be legalized by 03. Riverside District and Land Office reports a large volume of cases under 310. Comparison with work code 600 suggests an inconsistency

in the workload since it would appear that level of work under 600 should be more in line to that under 310. Further analysis and explanation of the difference will be required to establish a State program.

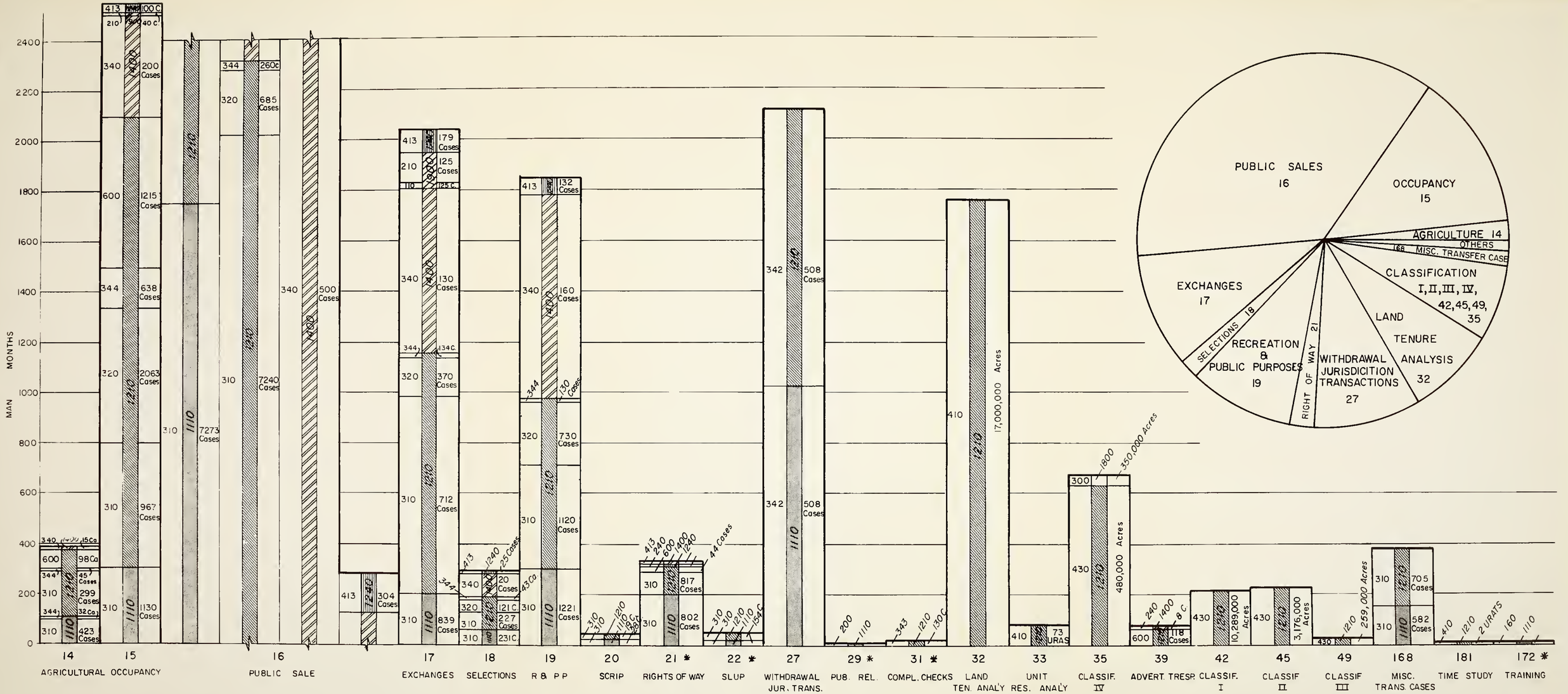
2. Job 16 - Public Sales - The chart reveals that workload for this job is located primarily in southern California in the Riverside District. Many of the cases will involve the consolidation of terminated lease small tracts and isolated tracts into sale units. Work for this program has already been done to a large extent, and therefore, there is question as to the small percentage of the total work that is to be accomplished during the 1968-1974 period, under 1110 and 1210 in the Riverside office. A larger output of the casework in this job can probably be accomplished in an efficient manner by a program coordinating land examination, appraisals and sale schedules operations between 1110-1210 activities. Further analysis appears necessary to determine the reason for minimal progress for this job. In addition, an analysis should be made of the support required from 1400-340 for the total State work since only a small part of the cases requiring surveys will be completed.

3. Job 17 - Exchanges - The chart illustrates the total exchange workload to be handled under petition-applications and reimbursable programs. When the proposed exchange regulations which will establish uniform procedures are adopted, it is anticipated that the total workload for the exchange program will be controlled and cases can be processed in a more effective manner. However, a system must be developed at the field level similar to the Pt. Reyes but more responsive to the demands of the benefiting agency, including BLM. Most of the offices except 03 and 04 expect to accomplish most or nearly all of the workload. It appears that additional manpower will be needed for cadastral survey because less than 20% of the total cases requiring survey are programmed.

The exchange work requires further evaluation since there are obvious discrepancies in the total work planned by the land offices and district offices.

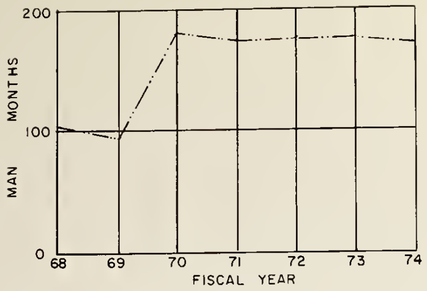
4. Job 19 - Recreation and Public Purposes - The offices having a large portion of the workload in this job category estimates completion of less than 50% of their total cases at the end of F.Y. 1974. A backlog of work in both petition-applications and Bureau motion classifications will develop unless the level of manpower needed to complete the job is increased.

5. Job 21 - Rights of Way - All offices, except Riverside District and Land Office, expect to complete nearly all of their cases in this recurrent job for F.Y. 1968. The job represents new cases as well as reactivated cases requiring reappraisal or adjudicative actions. It appears that Riverside's work in both 1110 and 1210 may include actions which may not require reactivation, thus reducing the count of cases. The job should be checked with that office to determine its total work.



* REPRESENTS ANNUAL RECURRENT WORK NOT TOTAL WORK

CALIFORNIA MANAGEMENT STUDY
LANDS
WORKLOAD TOTALS



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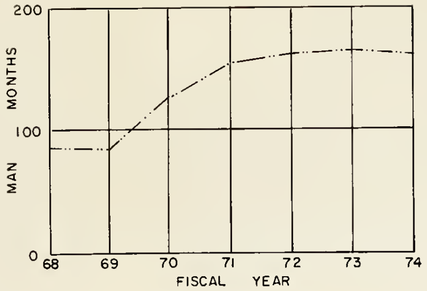

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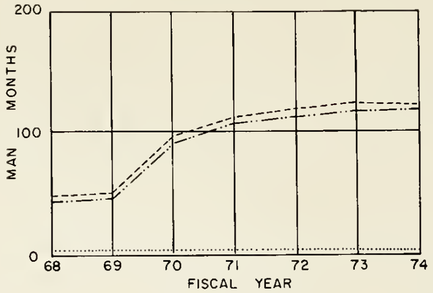

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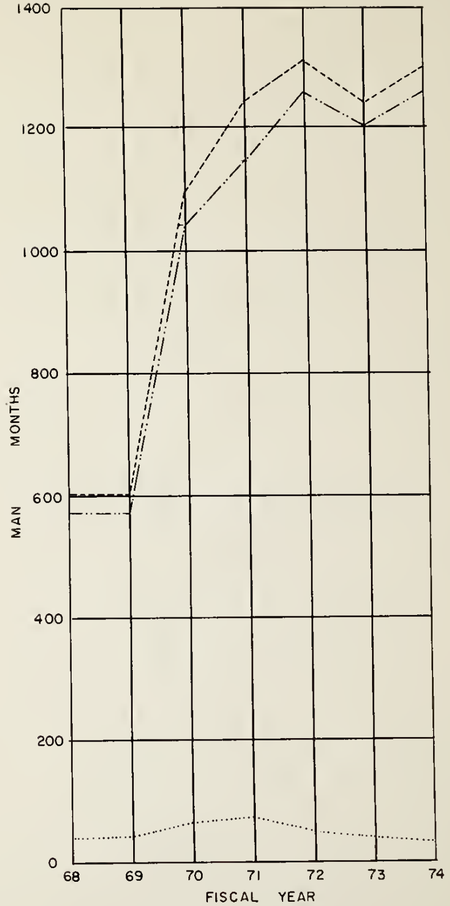
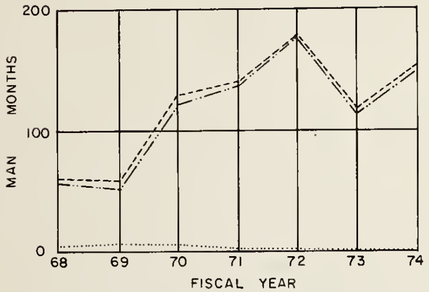
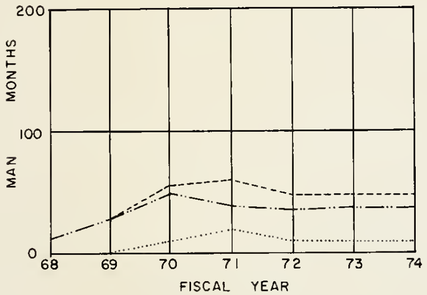


STATE TOTAL



DISTRICT 010



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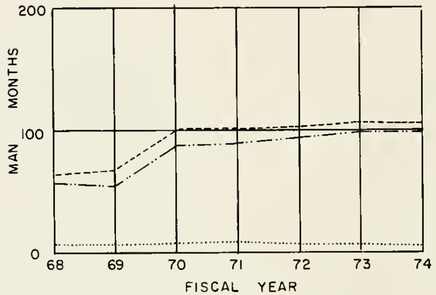

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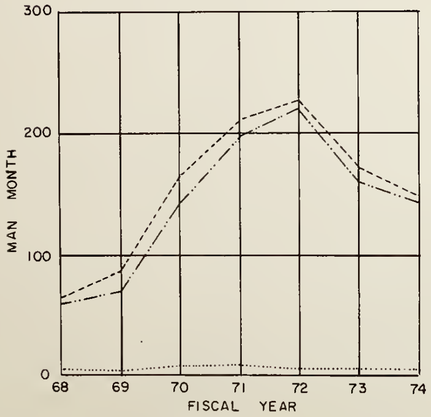

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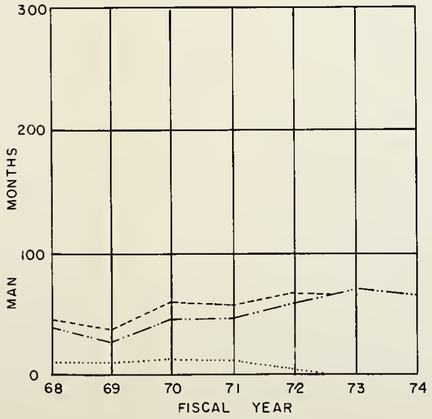

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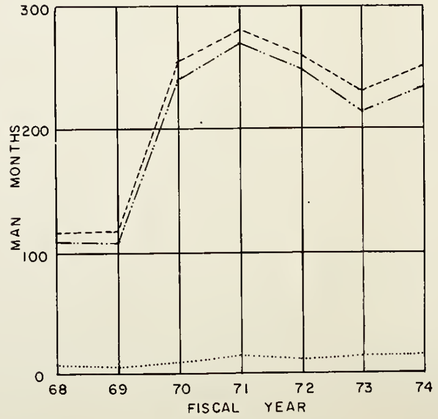
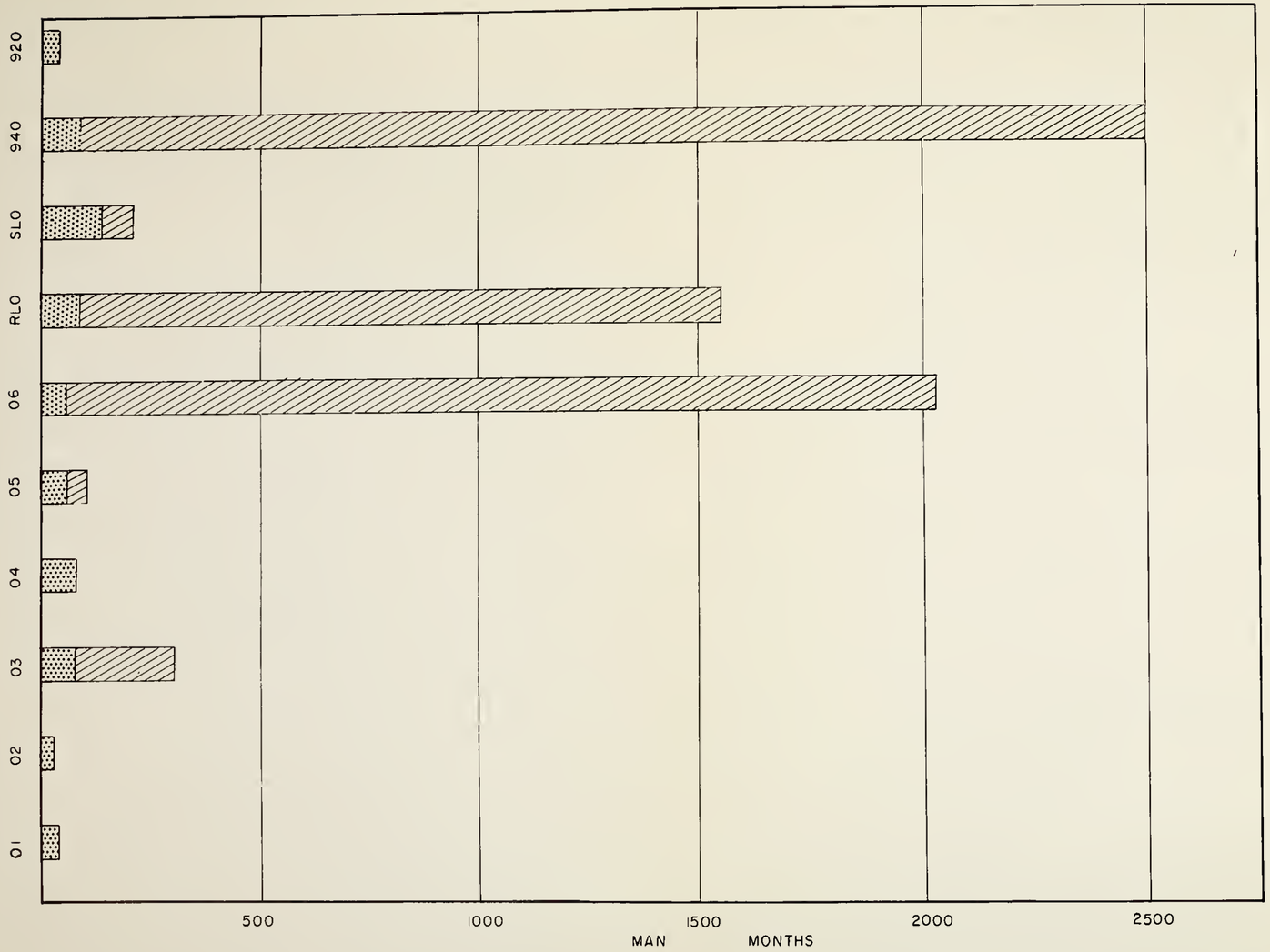


DISTRICT 060

TOTAL
RESOURCE DATA
OPERATIONS

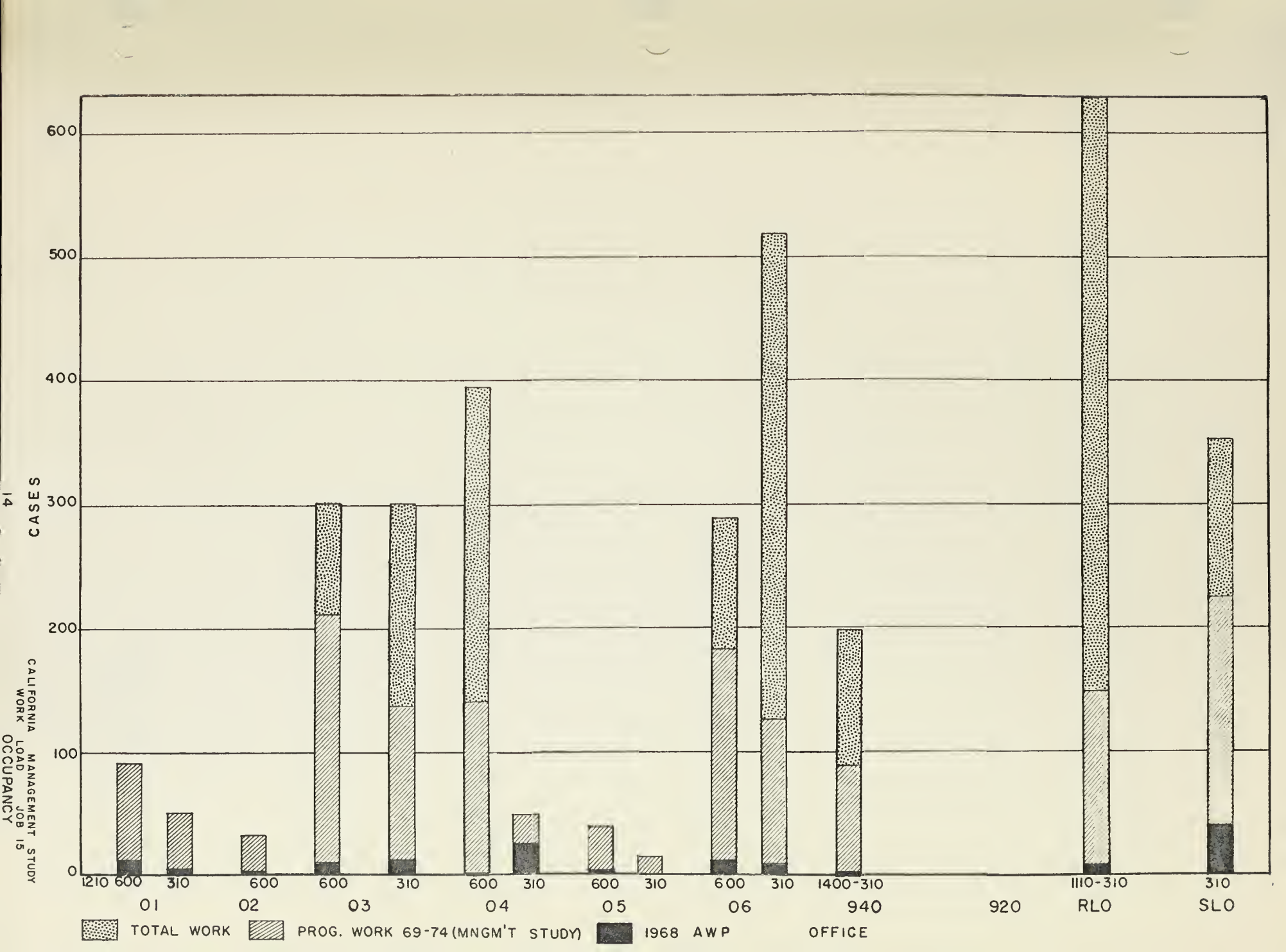
CALIFORNIA MANAGEMENT STUDY
PROGRAM ANALYSIS
LANDS



TOTAL WORK

F.Y. 1968 — 1974

CALIFORNIA MANAGEMENT STUDY
WORK LOAD JOB 16
PUBLIC SALES


CALIFORNIA
WORK LOAD MANAGEMENT STUDY
JOB 15
OCCUPANCY
14
CASES
600
500
400
300
200
100
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1210 600
310
600
600
310
600
310
600
310
600
310
1400-310
1110-310
310
01
02
03
04
05
06
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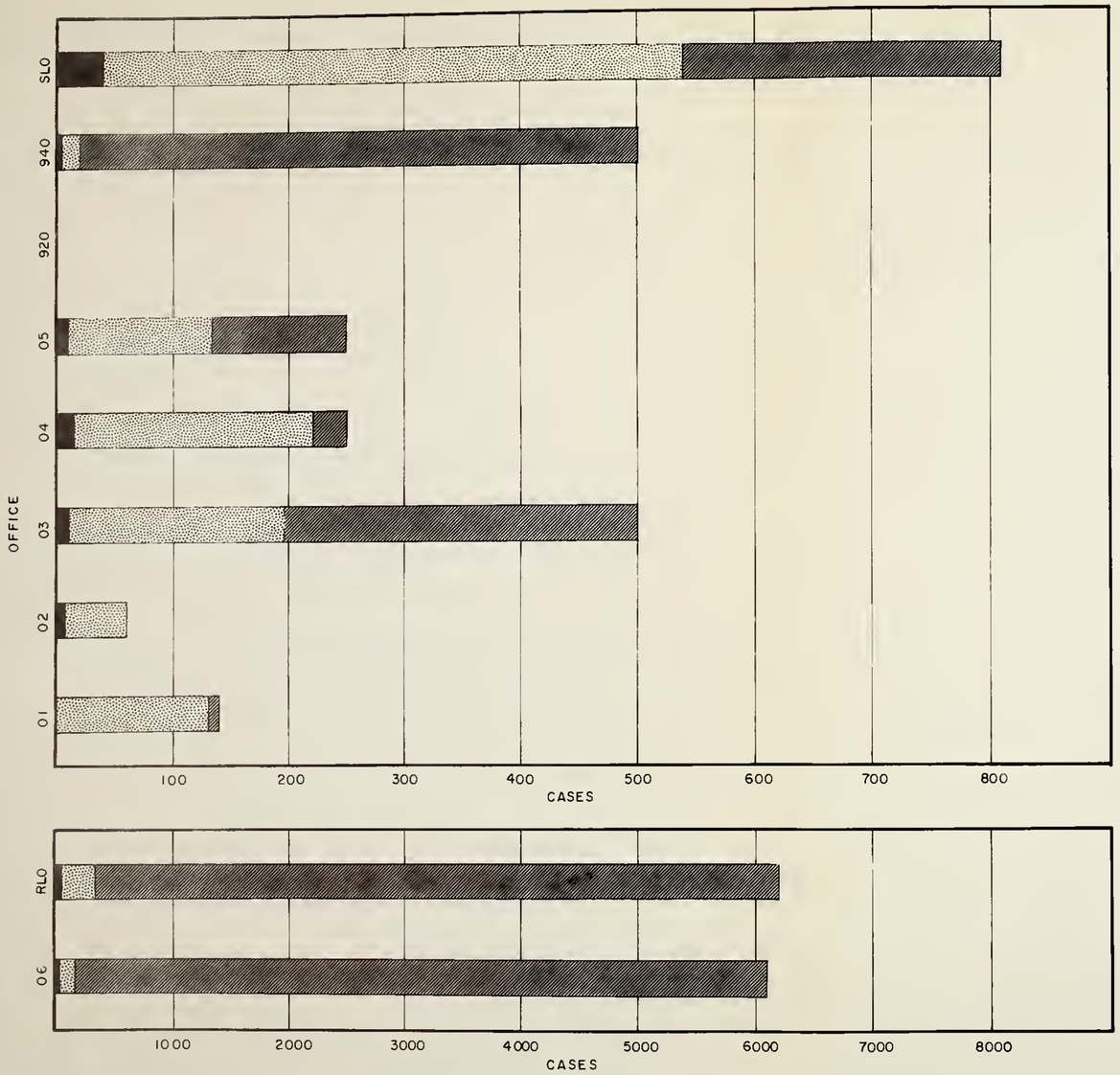
RLO
SLO
TOTAL WORK
PROG. WORK 69-74 (MNGM'T STUDY)
1968 AWP
OFFICE

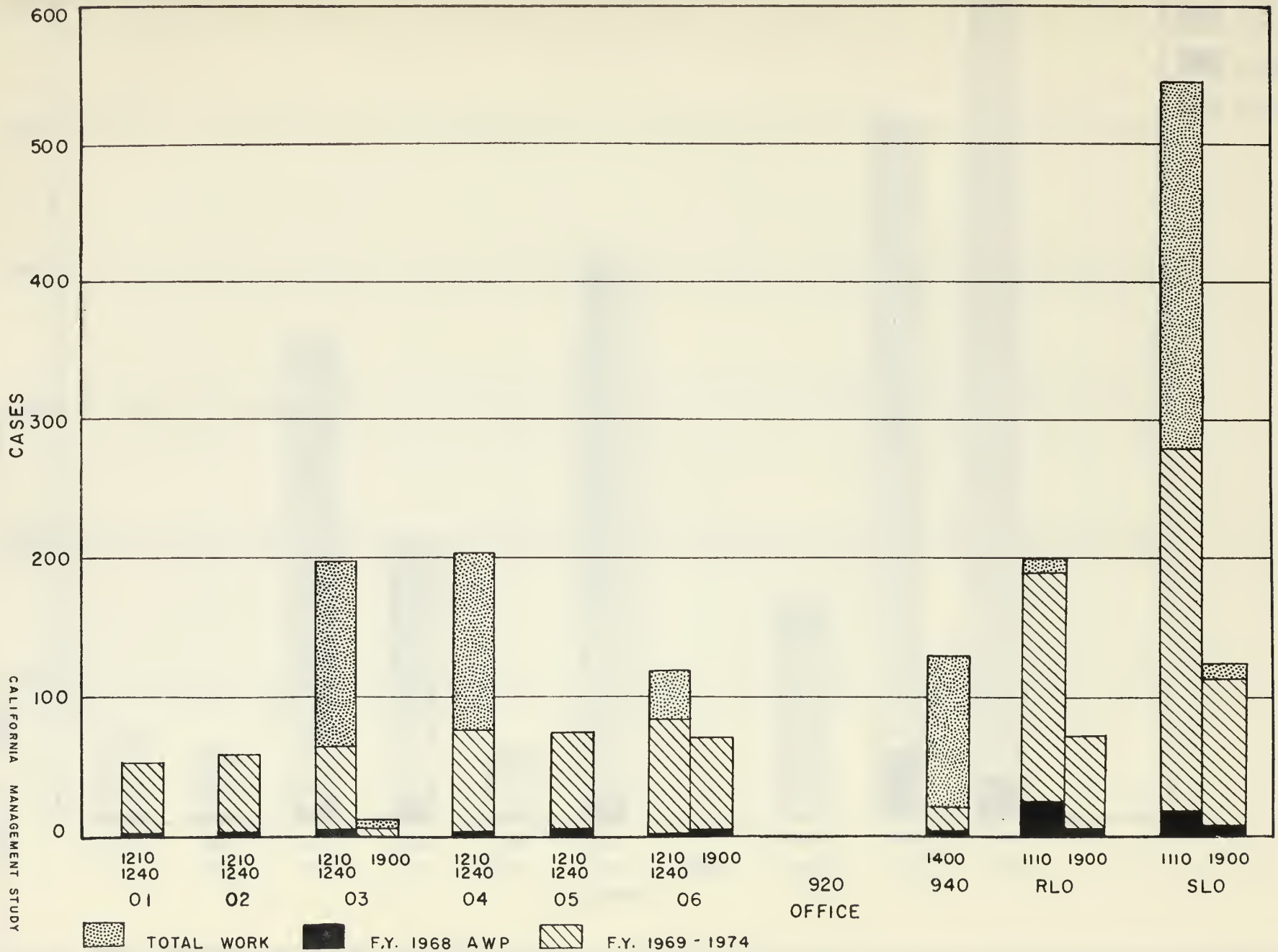


TOTAL WORK

F.Y. 1968 AWP

F.Y. 1969 – 1974 (MNGM'T STUDY)

CALIFORNIA MANAGEMENT STUDY
WORK LOAD JOB 16
PUBLIC SALES



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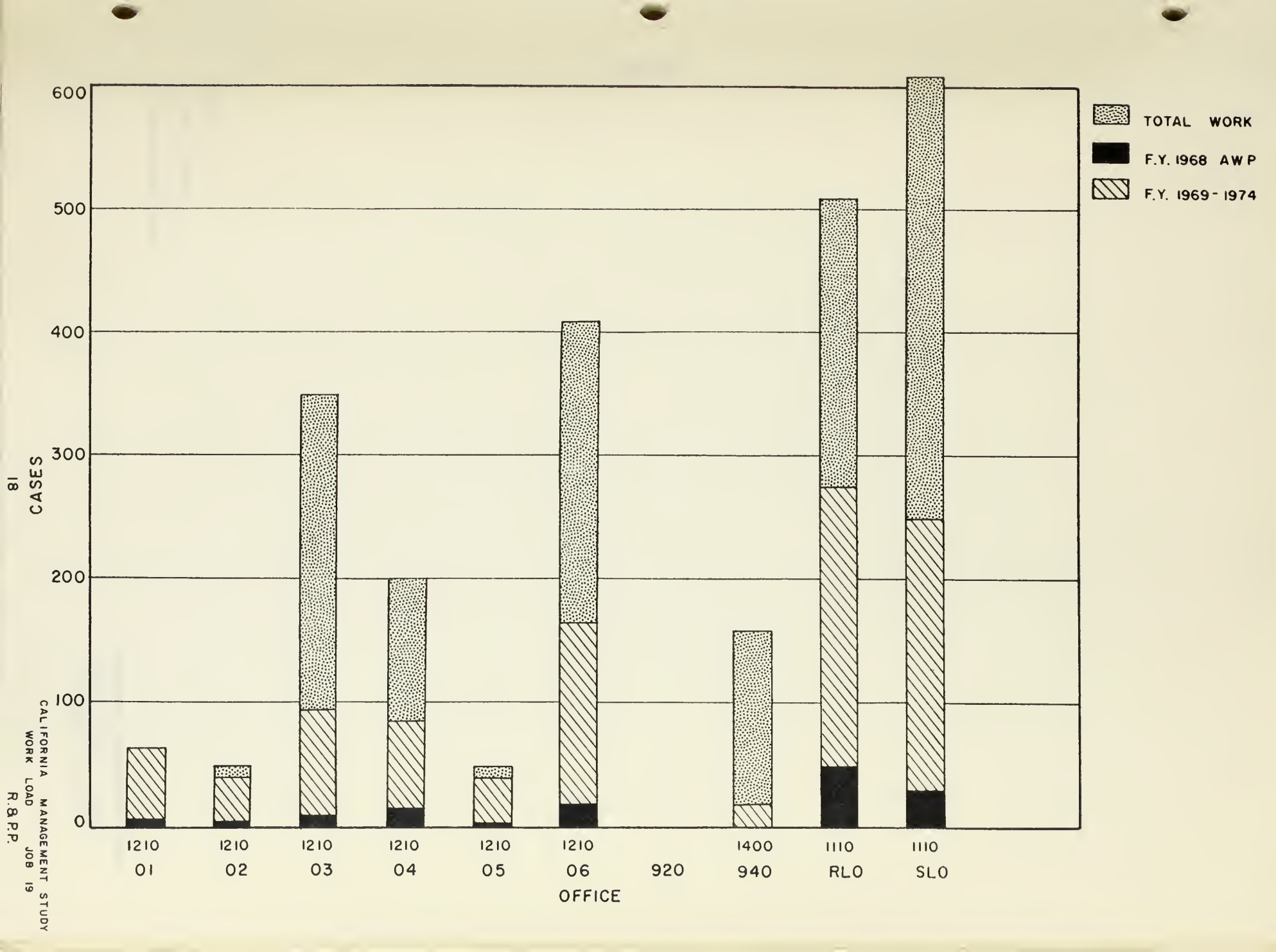

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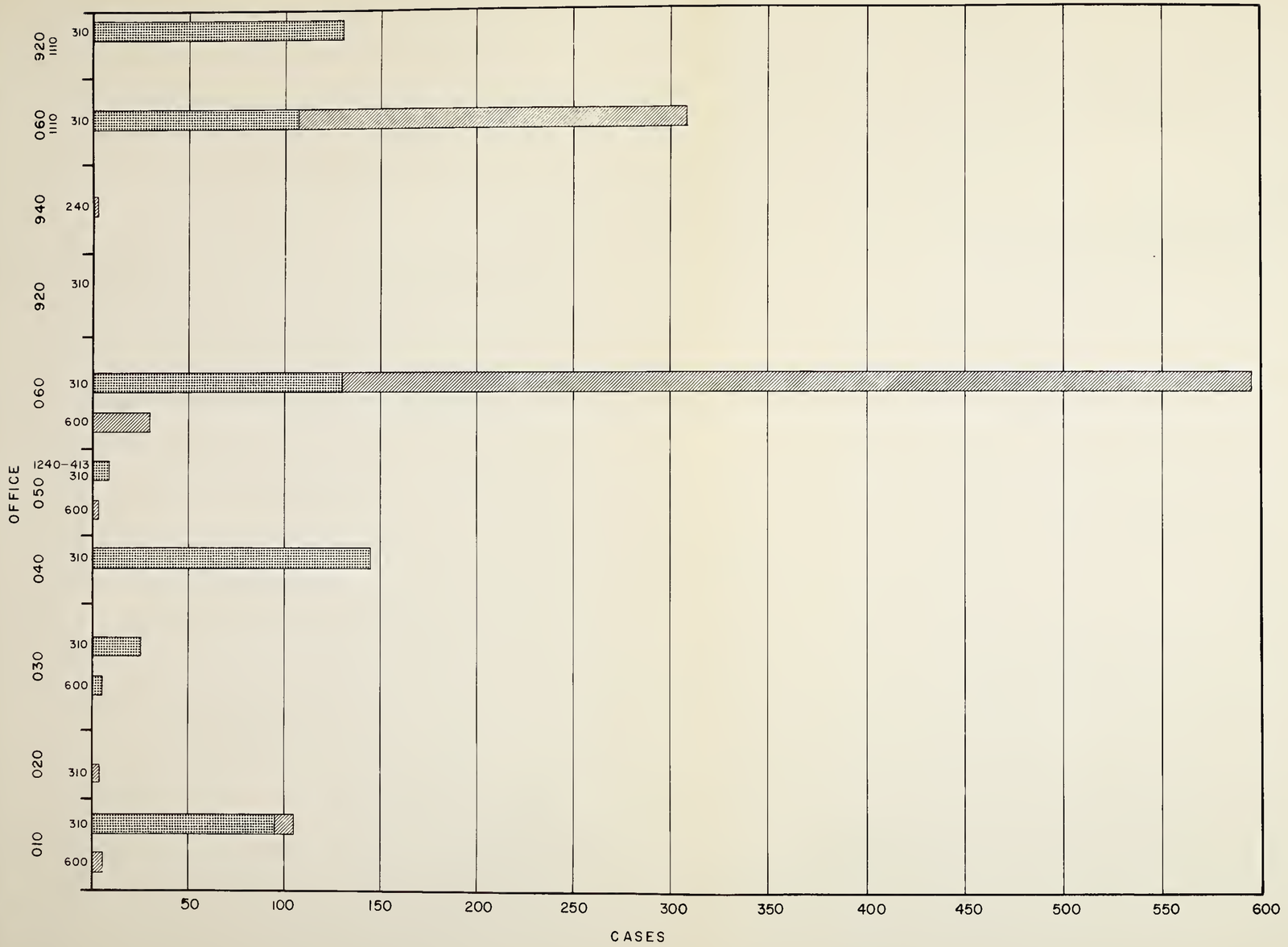
WORK LOAD JOB 19
R.&P.P.



LEGEND

Total Work 1968

1968 Annual Work Plan

CALIFORNIA MANAGEMENT STUDY
WORK LOAD JOB 21
RIGHTS OF WAY

CALIFORNIA MANAGEMENT STUDY

MINERALS PROGRAM

A. General Highlights

As defined in this study the minerals program includes:

1. Mineral resource inventory
2. Material sales
3. Mineral leasing
4. Mineral patent application examinations
5. Work initiated under PL 167
6. Surface protection
7. Reimbursable projects

A brief statement follows for those elements where problems exist that must be solved if we are to have an effective minerals program.

1. Material Sales - Currently, as in the past, sales are initiated by the general public. For the Bureau this is a costly and time consuming process. A bureau motion sales program based on regional needs of the public must be initiated if we are to meet the demands of the future.

To emphasize the need to begin such a program now, the following is quoted from a paper given on sand and gravel resources in Southern California at the February 1967 meeting of the AIME.

"All that the producers of sand and gravel can be assured of, based on increasing population and the construction use of these aggregates zoned for extraction, is a minimum of ten years.

Deposits of suitable sand and gravel are limited. If these deposits continue to be covered by residential, commercial and industrial developments, the demand for the aggregates will have to be met by importing from more remote deposits.

The next major deposits located 30 to 60 miles away from the major market place are in San Bernardino County. Riverside County has limited reserves close to their market. Therefore, most of their aggregates will come from Lytle Creek in San Bernardino County."

2. Mineral Leasing - Indications are strong that a geothermal steam (energy) leasing act will be passed in the near future. When this occurs, the land offices will be expected to assume the additional workload of issuing leases for geothermal steam.

The laws covering the leasing act minerals are somewhat similar. However, the "energy" law is expected to differ radically from these laws, resulting in the need for special training of land office personnel.

3. Surface Protection - We will, in the future, be expected to approve proposed mineral exploration and exploitation operations in order to prevent surface destruction.

Surface protection procedures related to energy and mineral leasing will require close coordination between the districts and the land offices in order that timely action can be taken on leases.

In addition, we will have to develop a program to reclaim the lands already destroyed by past mining ventures. An initial step of this program will be to make these old worked areas safe to the public as well as wildlife and domestic livestock.

To prevent surface destruction in the future, we will require 36 man months annually. No estimate is made for man months needed to eradicate surface hazards created in the past.

4. Reimbursable Projects - Current federal agencies requests for assistance require a minimum of 52 man months annually. We cannot allot this much manpower without jeopardizing our own programs.

We have so far this year had to deny three requests in their totality and one in part. If we are to continue to offer support to other agencies we must be staffed to undertake their projects.

5. Minerals Activity - More man months of mineral expertise are required in support of the other programs than are required for the minerals program. This is illustrated by a comparison of the mineral program graphs with the mineral activity graphs.

Where mining claims conflict with other programs, mineral examination must be completed before our other programs can be initiated.

6. Special Problems - Our study indicates that more than 40 mining engineers and geologists will be required for a four year period if our programs are to be carried out in the time contemplated. Before any of the programs requiring mineral support are initiated, our ability to recruit these people will have to be assured. The following illustration indicates the magnitude of our recruitment job.

In 1965 some 575 geologists and mining engineers were graduated in the United States. We would have to recruit the equivalent of 7% of the 1965 graduating class to initiate our programs.

B. Regional Workload Differences

The minerals program in the respective districts is dependent to a great extent on the demands of other government agencies and the general public. With the exception of work conducted on the minerals resource inventory and that initiated under PL 167, total workload projections must be based to a large extent on the knowledge of our personnel. To some extent the variances shown by the district graphs reflect this knowledge as well as the optimism or pessimism of those compiling the data used in constructing the graphs.

As can be seen from the minerals program analysis graphs, man months required vary widely in the districts and the State Office. The reasons for those variances illustrated by the minerals program graphs are given below.

State 920

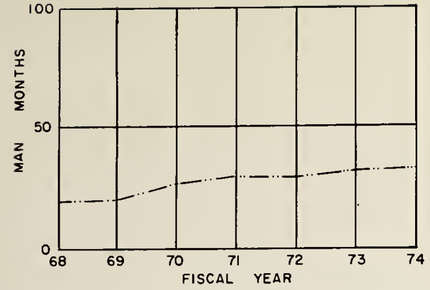
The operations data includes the man months required for all reimbursable work in the State.

Riverside 06

Much of the State's material sales program will be developed in this district and the operations graph reflects the additional man months needed to initiate a bureau motion program.

Susanville 02

The graph for this district reflects a minimum minerals program consistent with our present knowledge of the mineralization of the areas and the expected demand for mineral materials. Discoveries of minerals based on privately sponsored exploration could radically change the district's needs both for mineral patent examinations and surface protection guidance.



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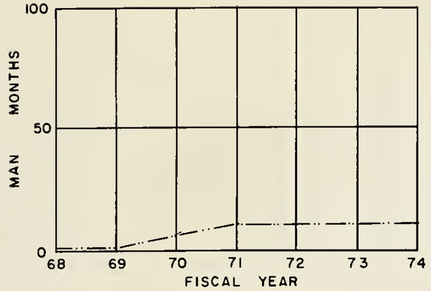

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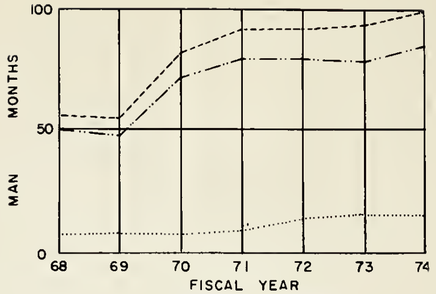
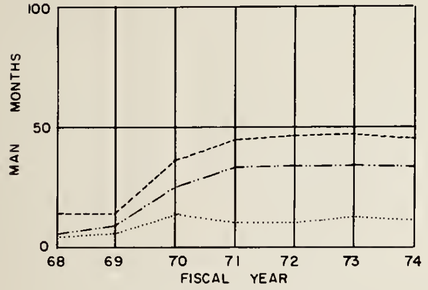


STATE OFFICE



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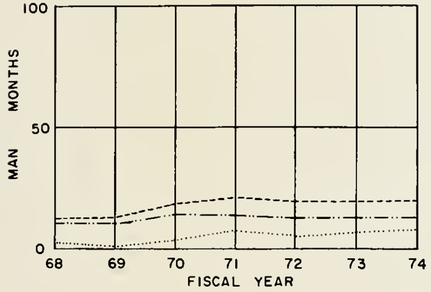

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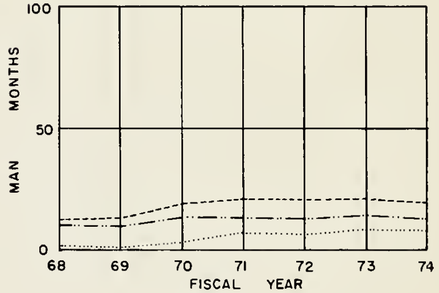

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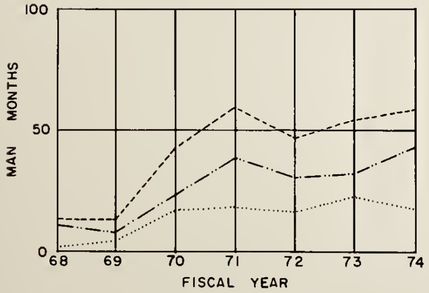

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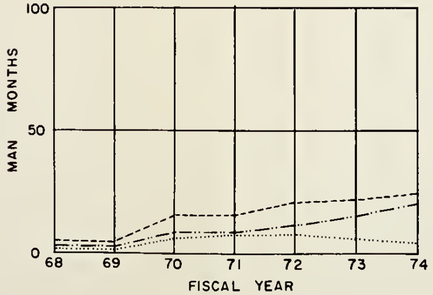

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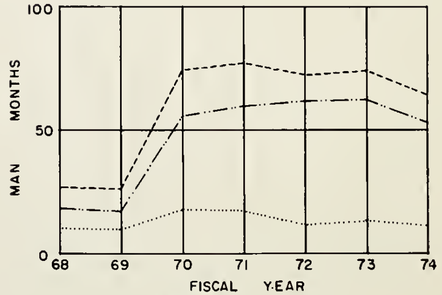

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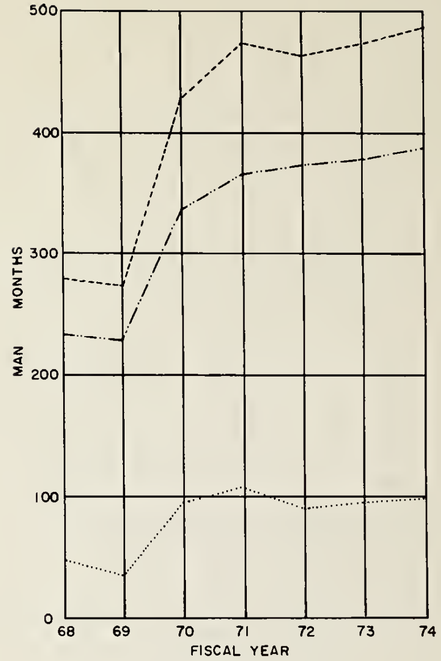
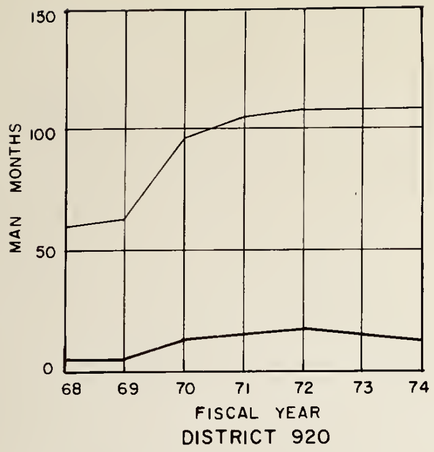


STATE TOTAL

TOTAL
RESOURCE DATA
OPERATIONS

CALIFORNIA MANAGEMENT STUDY
PROGRAM ANALYSIS
MINERALS



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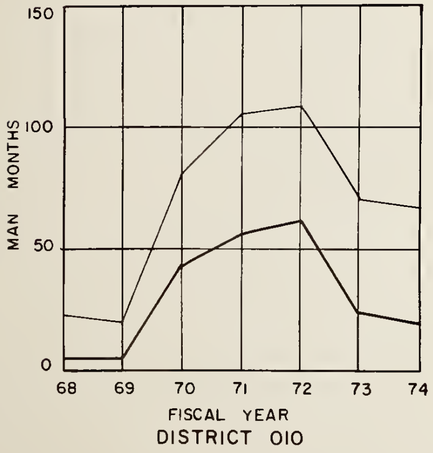

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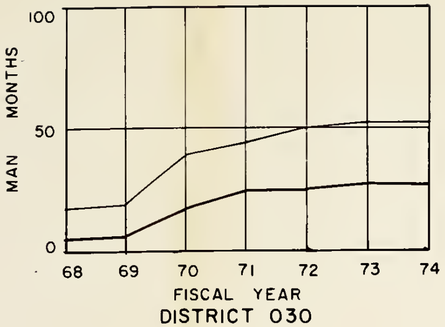

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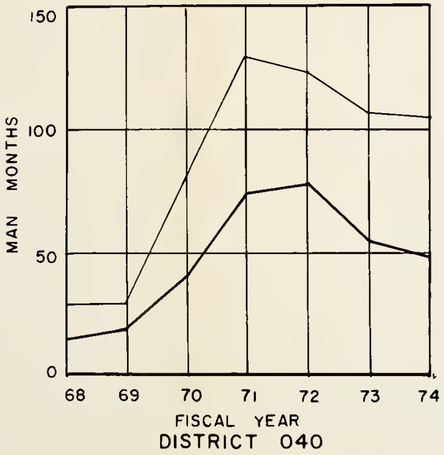

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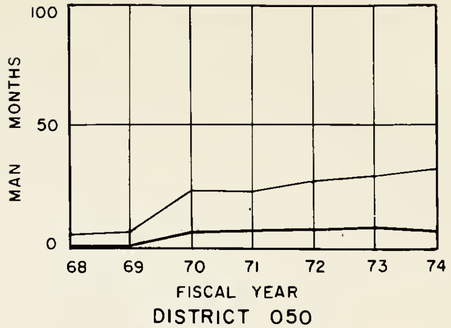

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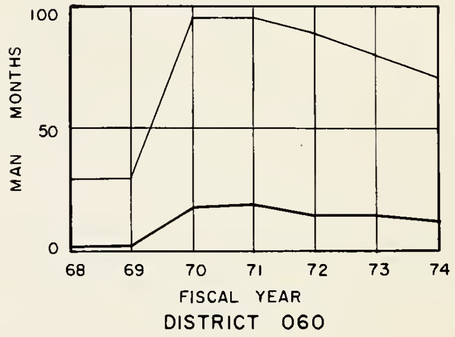
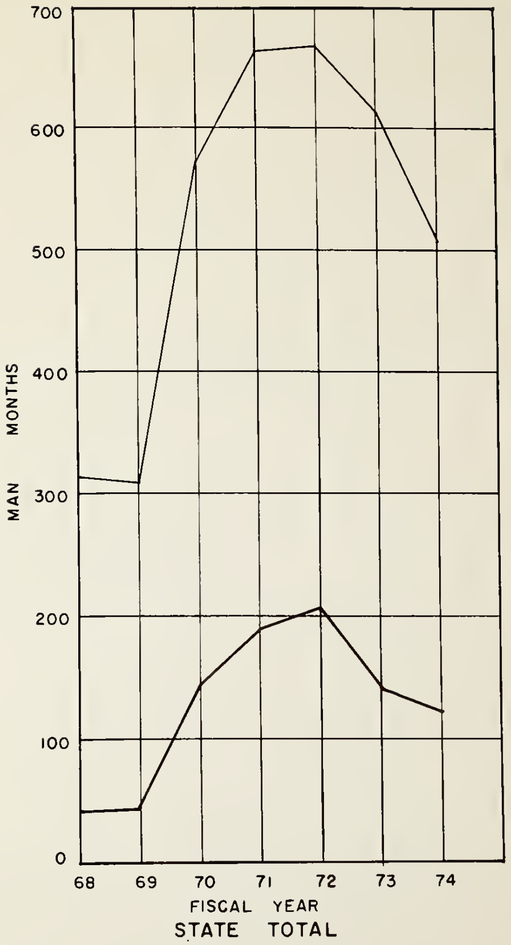


DISTRICT 060

MINERAL SUPPORT

MINERAL PROGRAM & SUPPORT



STATE TOTAL

CALIFORNIA MANAGEMENT STUDY

RECREATION PROGRAM

A. General Highlights

In order to accomplish an efficient recreation program we must utilize our Bureau manpower properly. To do so, it is necessary that we achieve the proper balance between planning, development, and operations. The recreation phase of the California Management Study begins to show this relationship, and the problems in achieving this balance.

In summary, the management study indicates a problem of coordination between recreation activities, plus a lack of manpower and money to do a satisfactory job. This lack is greater in certain activities than it is in others.

Because recreation is programmed in activities 1210, 1700, 2110, 2120, 2210, 2220, and to some extent 3100, coordination of these functions into a smooth running operation is not an easy task. This situation is further complicated by the fact that funds for these programs come from three separate appropriations. Other activities not generally recognized as affecting recreation programs must also be coordinated with that program. Examples are the 1210 activity connected with clearing mining activities, also under 1210.

The programming system and its operation at present have a serious gap between the Planning functions funded under 1210, and the Survey and Design work funded under the 2120 Series. As a result, budget estimates have been predicated upon preliminary site sketches which are not complete enough to allow for realistic cost estimates. In the past at least, a project must have been approved in the budget before we were able to utilize the 2120 Survey and Design funds to make detailed plans. When this work and the construction itself are compacted into one fiscal year, any delay can cause carryovers to another fiscal year. This in turn has a poor effect upon our success in future budgets, and we are caught in a tight circle. The recreation program suffers as a result.

1. Comments on Total Workload and Present Situation:
The District's submissions have been based upon the present system and its limitations. The 500 series in the 1210 subactivity, made up of 510, 520, and 530, offer the only possibilities for programming general recreation activities at the district level. Comments are as follows:

1210-500 Planning
At the present time, the cost accounting and programming systems do not identify time spent doing "daily recreation administration", such as gathering and analyzing statistics, compiling information for impact studies and other requested reports, public agency cooperation, "show me" trips for Bureau and other personnel, and other work that is required to carry out a day to day operation.

By not identifying the effort spent in "Daily Recreation Administration", the system reduces the overall total number of units over what is actually indicated (see the recreation inventory, planning, and protection chart).

The present situation shows we are inventorying and doing preliminary site plans for 2500 family units (See Planning and Inventory Chart). However, what we are actually doing is somewhat different. Our present 26 M's of effort are identified only in:

1. Recreation Inventory
2. Unit Resource Analysis
3. Recreation Planning (Prel. Site Plans)
4. Recreation Protection

2120 - Construction
The 2120 program for F.Y. 1968 is affected by a number of factors.

1. Lack of design money in F.Y. 1967 for the projects to be built in F.Y. 68 (no money was allocated).

2. The necessity to use F.Y. 1968 project money in F.Y. 1968 to survey and design the projects scheduled for construction in F.Y. 68 reduces the money available for each project, thereby reducing either
   a. Number of family units constructed, or

   b. Quality of construction.

3. The limited design money in F.Y. 1968 ($7,000) for a large construction program in 1969 affects either

   a. The F.Y. 69 construction program by only being able to survey and design for an approximate $70,000 construction program, or

   b. Reduces the F.Y. 1968 construction program still further by "borrowing" F.Y. 68 project money to pay for a larger survey and design program in F.Y. 1968.

   Something to watch closely and try to avoid is any wide fluctuation in the construction program. It takes a number of years to train and develop a staff to handle a certain size program and any reduction in it will affect future efforts for a number of years.

2220 Maintenance

Our maintenance program in F.Y. 1968 is not up to the quality that it should be because manpower ceilings and curtailed funds affect the total work that needs to be accomplished. The "Total Work and Maintenance Graph" for Recreation shows present MMs for F.Y. 1968 AWP. The indication is that all of our sites that require operation (job numbers 214 and 215) cannot be operated by present MMs and funds, and are not scheduled in the current AWP. The same indication is read from the data for maintenance (job numbers 216 and 217).

A certain percentage of our recreation sites will have to be maintained by Bureau personnel because of the combination of geographic location and lack of interested people or groups to do the job. By not having enough manpower to do the job properly we have to spread the personnel out over a larger area with the result that facility operations and maintenance suffers. Furthermore, limited funds to carry out our contract operations and maintenance schedules also reduces the quality of our program.

2. Situation Through 1974

1210-510 - Recreation Inventory

The district offices show a small effort in inventorying

new recreation sites and updating existing sites. This amount is probably low because some districts have 25% or more inventorying work to do.

1210-520-Recreation Planning
The district offices have shown a 30% increase in their MM of effort in preliminary planning (See Chart Personnel by Years) from 1968 through 1974 while the 2120 construction program (see State Construction and Maintenance Graph) shows an increase of 500 percent.

This indicates that:

1. We are doing more preliminary site planning than is necessary at the moment or

2. We will not be doing enough by 1974.

It is quite possible that we are presently doing more site planning than necessary but we will not be doing enough by 1974 to meet the planned construction program.

1210-520 - Unit Resource Analysis
It is possible that more effort will be needed to complete the U.R.A. and keep it updated.

1210-530 - Recreation Protection
It is quite evident from the study that there is too much time programmed for protection compared to the total recreation program of the districts. It is hard to believe that we should spend 25 MM of effort in protection in the districts and only 17 MM in planning.

2120 Recreation Construction
A total of 15,604 family units to be constructed have been identified by this Study. Of these, 3,841 are scheduled for construction between F.Y. 1968 and F.Y. 1974. The construction would be approximately 25 per cent of that identified. This would require expenditure of 1,069 MM during the 7 years of the Study.

2220 Recreation Maintenance
A total of 15,764 family units to be operated and maintained have been identified in the study between F.Y. 1968 and F.Y. 1974. This would require 886 MM of effort. This maintenance operation is related directly to the construction program.

3. Directives and Advices

a. 1210-500 (see the Inventory, Planning and Protection Chart)

In our 1968 program submission of January 30, 1967, California programmed 79 units of work requiring 42 man months of BLM personnel. The Washington Office in their F.Y. 1968 AWP advices told us to plan for 65 units of accomplishment requiring 33 man months (man months established in California).

These 65 units as California programmed them in January 1967 were estimated as follows:

		Unit	MY
PWE 510	Inventory of New Sites	12	2
510	Updating of Inventory	28	4
520	Preliminary Planning	22	26
530	Archeological Site Protection	3	1
	Totals	*65	33

In developing California's F.Y. 1968 AWP submission, there were only 26 man months of time available for the Recreation Inventory, Planning, and Protection program. As a result, the units of accomplishment had to be reduced accordingly.

A factor that will reduce still further the total programmed units of accomplishment for F.Y. 1968 is the amount of work accomplished in daily recreation administration but where there is no work code to identify it.

*In order to graph the total work effort in recreation, units of accomplishment for 1210-500, 2120 and 2220 were converted to family units.

b. 2120 and 2220

A "Projected target level for funding in thousands of dollars" was received with the Program Advices for F.Y. 1969. This follows:

F.Y. 1969	F.Y. 1970	F.Y. 1971	F.Y. 1972
700	1,000	1,100	1,500

No advance survey and design funds were indicated. The AWP directives for F.Y. 1968 allocated $7,000 for survey and design. This amount, of course, is inadequate for the indicated construction program for F.Y. 1969. Construction funds (2120) being used to Survey and Design in the same fiscal year as the construction was scheduled has been the normal. No lead time can be gained in this manner, as was commented upon above.

A $700,000 construction program in F.Y. 1969 would require in F.Y. 1968:

	Activity	Work Code	Job No.		
1.	2120	200	206	25 units / mm	14 mm
2.	2120	200	207	12 units / mm	29 mm
3.	2120	200	208	50 units / mm	7 mm
				TOTAL	50

At an average cost of $900 per MM, funding of $45,000 is required. This is based on an average construction cost of $2,000 per family unit and 350 units, and does not include work codes 120, 150, 160.

4. Special Problems

Public lands in California face a growing number of problems that are arising due to the large and ever growing population in the state. The more immediate are:

a. Littering and clean-up of public lands due to recreation use.

b. Development of large reservoirs on or adjacent to public lands creating recreation attractions. The BLM's role in the development and operation of the recreation facilities of these proposed sites has not yet been clearly defined. In California 175 proposed projects have been identified that will require BLM' impact reports during the management study period. The staff necessary to handle the operation and management of the project lands at each of most of these proposed areas could average 20 to 25 full time employees. Each project could require a recreation staff of 5 people or more for any year to accomplish all necessary planning and design.

c. Uncontrolled recreation use of desert areas in southern California by four wheel drive clubs, motorcycle clubs, dune buggies, rockhounders, etc. (See the slide illustrations).

d. A general lack of BLM personnel in the field at the time recreation users are there.

e. There is a large and potent problem caused by the very many open mining pits which create extreme hazard to users of the public land. (See the slides illustrating some of such hazards).

5. Conclusions and Recommendations

a. By 1974, recreation should have attained full Division status in the California State Office. This Division should have two branches, one for recreation planning, the other for operation of recreation sites. With the expanded demand created by California's ever increasing population, and the development of the many water projects affecting BLM lands, it is imperative that BLM be staffed properly both for planning and operation of sites.

b. Efforts should be made at the Washington level to have recreation achieve full activity status, incorporating into one activity the items now spread into several different activities and divisions.

c. If possible, the funding for recreation should be accomplished in one appropriation, rather than in the three presently involved, i.e. MLR, and the 2000 and 3000 series.

d. Legislation and regulations are needed for protection of the public lands. Abuses such as unrestricted motorcycle usage must be controlled while at the same time permitting uses where appropriate.

e. The Bureau must take steps to protect members of the public from the hazards on the public lands such as open mining pits, etc. This problem also includes recognition of the costs needed to implement the recently announced policy on such hazards.

f. In order to analyze the public lands in California in relationship to a sensible recreation program we need to develop

   (1) A larger recreation staff to gather recreation data and analyze other recreation information.

   (2) Develop specific studies, such as the Southern California Desert study proposed with the National Park Service. This study will furnish informational conceptual ideas necessary to develop a sound recreation program for our desert areas in southern California.

   (3) Develop goals in water oriented projects (this could result in the development of an increased planning staff just to handle proposed reservoir recreation oriented projects.

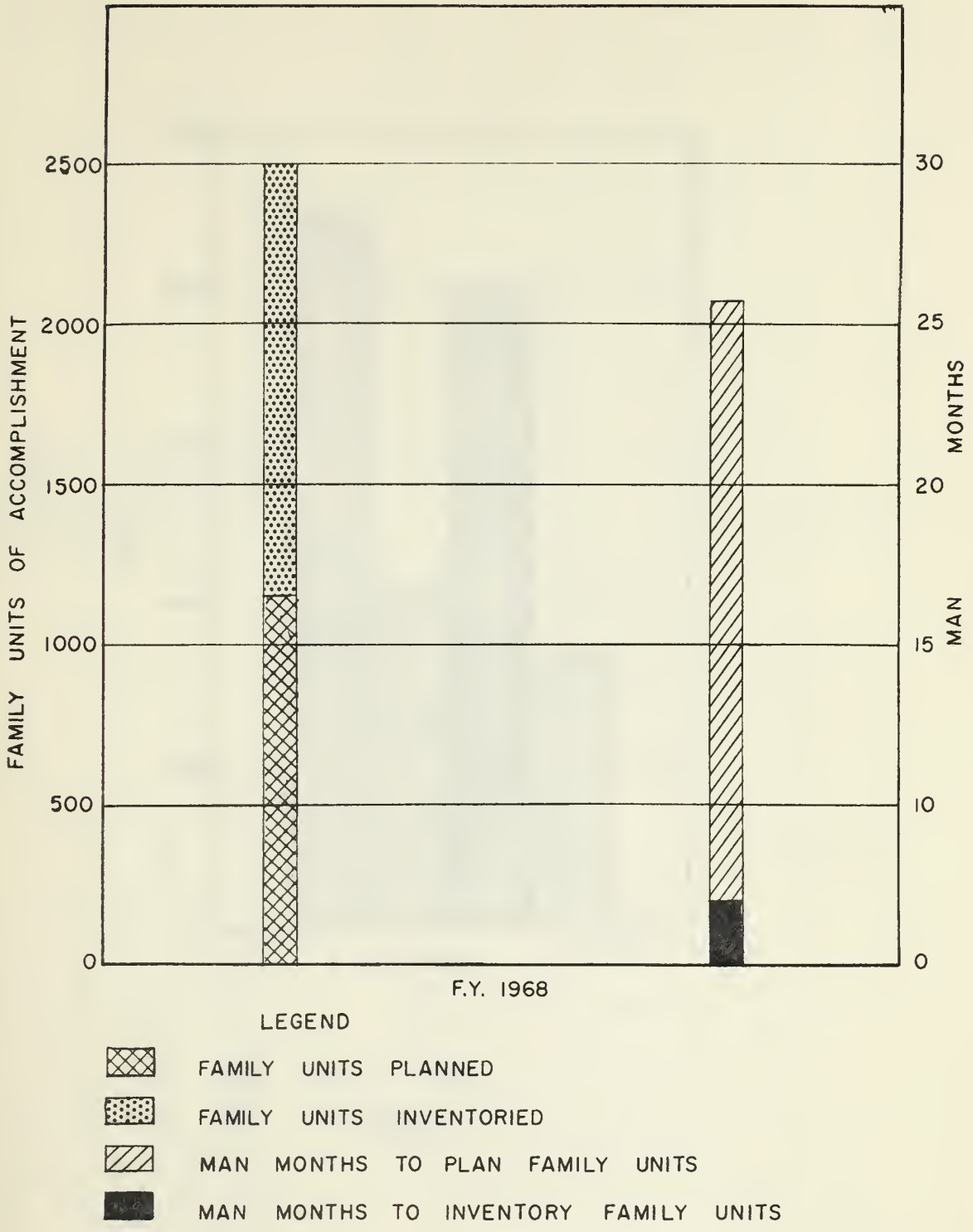
g. Develop a strong program in cleaning the public lands of litter and trash (poor house keeping breeds poor habits in the general public using our public lands).

h. In order to describe the total work to be accomplished, additional work codes should be developed (see proposed additional Recreation work codes).

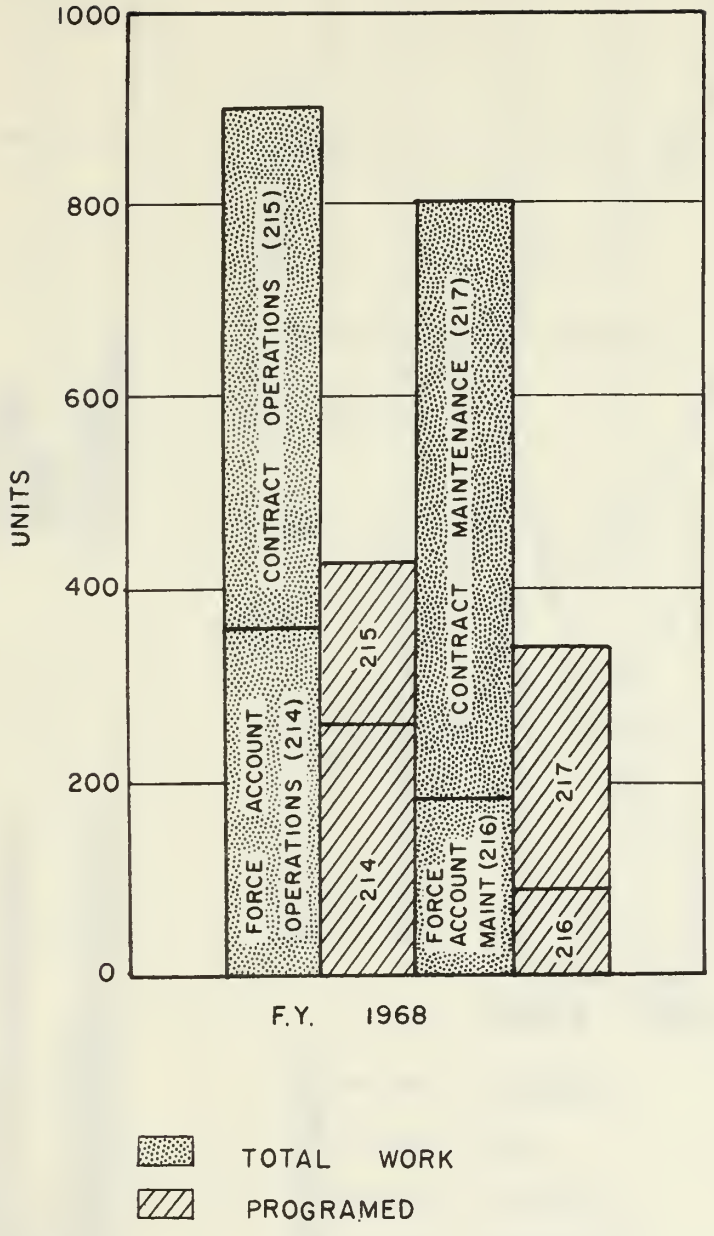
i. Because of the present lack of necessary advance survey and design funds in the 2120 program that adequate funds be made available at least one year prior to construction.

j. Additional study be done to determine the most economical methods of maintaining our recreation facilities and undeveloped sites.

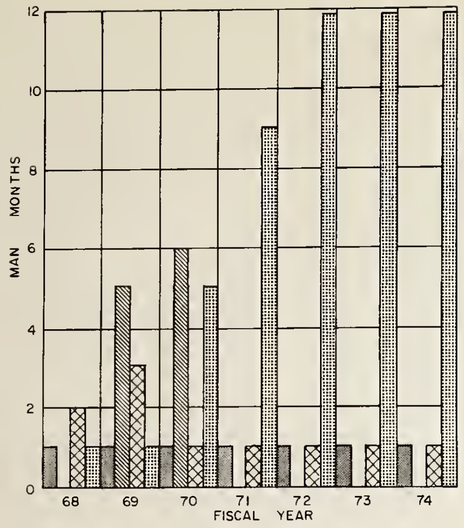
CALIFORNIA MANAGEMENT STUDY
RECREATION
INVENTORY, PLANNING
& PROTECTION



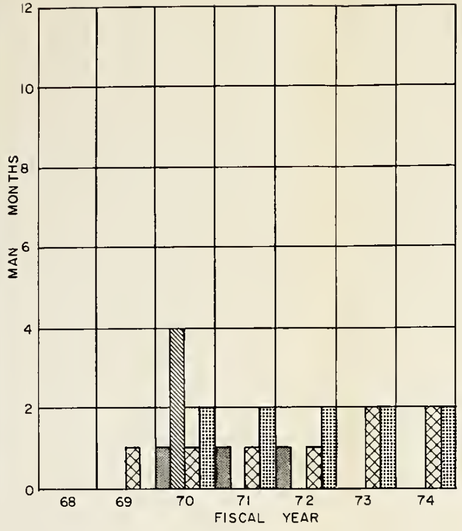
CALIFORNIA MANAGEMENT STUDY
RECREATION
PLANNING & INVENTORY



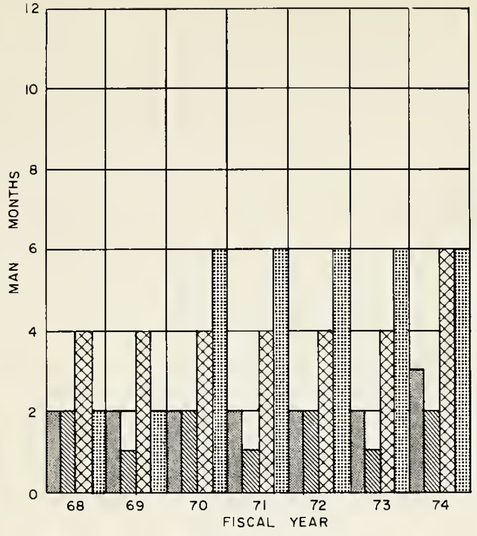
CALIFORNIA MANAGEMENT STUDY
RECREATION
TOTAL WORK & MAINTENANCE



DISTRICT 010



DISTRICT 020



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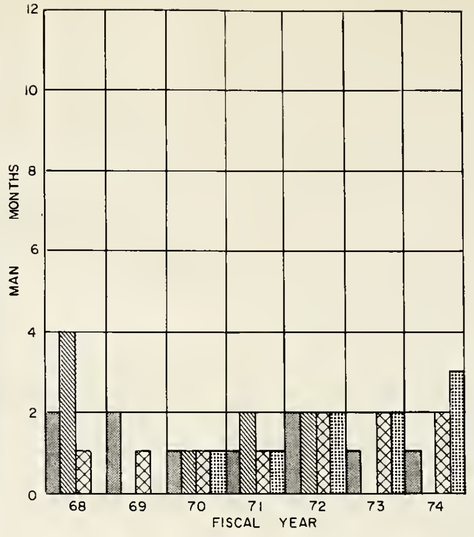

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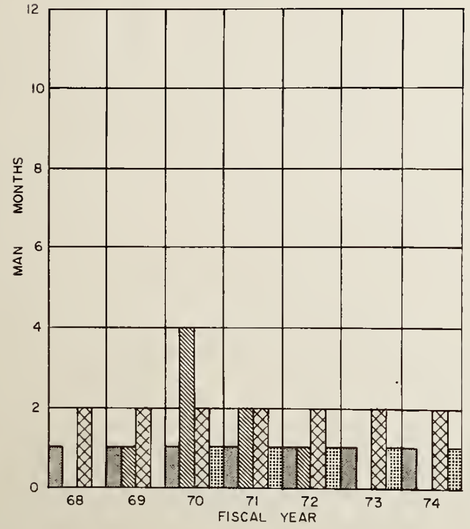

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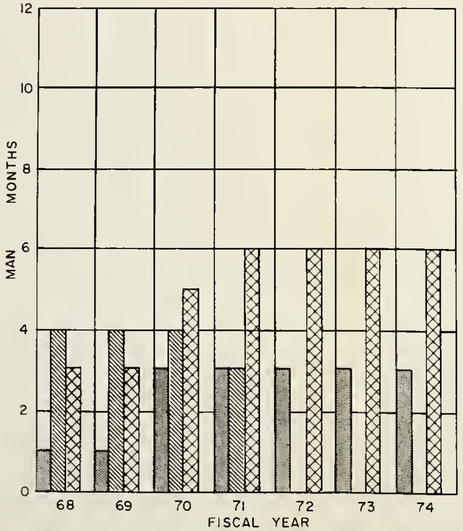

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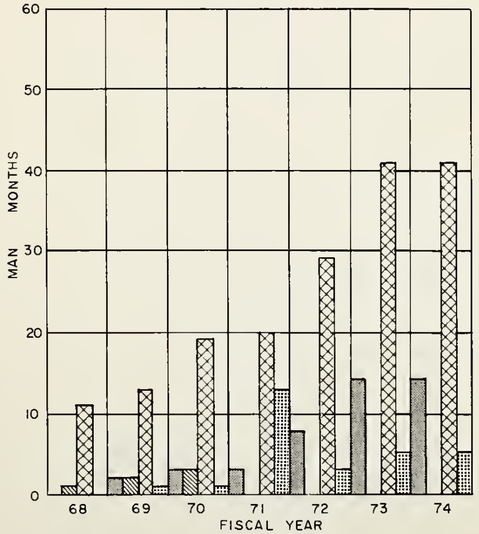

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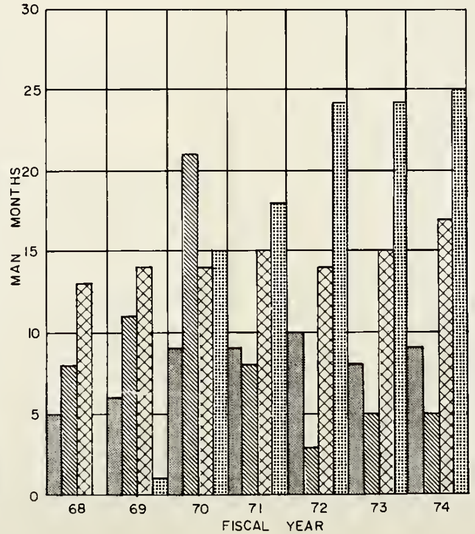

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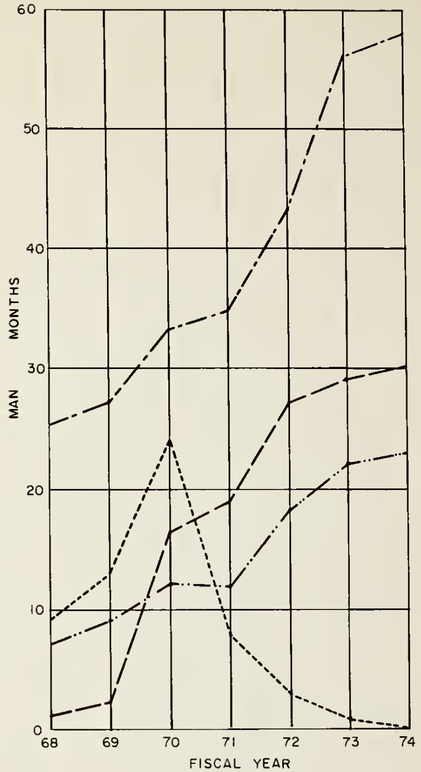


STATE TOTAL

CALIFORNIA MANAGEMENT STUDY
PERSONNEL BY YEARS
RECREATION

ACTIVITY	WORK CODE	JOB NO.	TYPE OF UNIT	UNIT PER MM	WORK CATEGORY	DEFINITIONS	MANAGEMENT CRITERIA
1210	510	36	Family Unit	200	Inventory, Recreation	See Instructions	4 sites based on 500 units
	511	*	Planning Unit	1/2	Statistics, Recreation	Includes reconnaissance, developing procedures, gathering and analyzing data resulting in recreational user information.	U R A Planning Unit
	512	*	Study	1	Reports, Recreation	Includes time spent on impact studies, reports to support withdrawal requests, feasibility studies and other written material necessary for support of the recreation program.	
	513	*	Project	1	Research, Recreation	Time spent on developing new ideas and techniques for improving use areas and studying results of other research data.	
	514	29	MM		Public and Cooperative Relations	See Instructions	
1210	520	33	Planning Unit	1	Unit Resource Analysis	See Instructions	
		37	Family Unit	100	Planning, Recreation	See Instructions	
	521	*	Plan	1/3	Master Plans, Recreation	Includes time spent on field investigation, data compilation and necessary development of plans leading to (1) Area, (2) Complex or (3) District or State Recreation Master Plan.	Include access plans for BLM projects. Work ranges from broad general objectives to detailed plans.
					Preliminary Site Sketches: (Non-imput) including time spend on field investigation, data compilation, cost estimates. Necessary drawings for specific sites.		
1210	522	*	Site	1	Land Base Overnight Use	See Above	Camping 1 site - 400 people
	523	*	Site	1	Land Base Day Use	See Above	Picnicking, Trail Use, Hunting 1 site - 800 people
	524	*	Site	1	Water Base Overnight Use	See Above	Camps w/Boat Docks--1site 200 people
	525	*	Site	1	Water Base Day Use	See Above	Swimming, Fishing, Picnicking - 1 site 400 people
	526	*	Site	1	Passive Recreation	See Above	Historical Sites Nature Trails, Overlooks, Interpretive Centers, 1 site - 500 people
	527	*	Project	1	Contract Planning Recreation	Time spent on bid drafts, preparing formal agreements and negotiations for government work with private firms.	
	528	*	Project	2	Cooperative Planning, Recreation	Time Spent in developing plans with private land holders	
	529	*	Project	4	Access, Recreation	Time spent on access (R/W) arrangements across P.D. to other recreation developments	
	530	38	Site	2	Protection, Recreation	See Instructions	
	540	*	Plan	2	Management, Recreation	Includes time spent in developing operating needs and agreements for conducting the program within sites, areas, complexes or total district project. Management plan would include such items as law enforcement, protection work, safety and life guard arrangements, etc.	
	541	*	Project	2	Rehabilitation, Recreation	Includes time spent on determining needs, costs, techniques and justification for reclamation and reforestation of burned over, cut over and waste areas.	
2120 2220					Construction Program) Maintenance Program)	To remain as developed for time being.	

*Job numbers to be assigned.

CALIFORNIA MANAGEMENT STUDY

RECREATION PROGRAM

B. Comments on District Submissions:

1210- 510 Recreation Inventory (See the Recreation Inventory Chart) Generally overall, the districts have probably completed only 70 to 80% of their inventory, necessitating a small additional increase in MMs over the study period.

The Susanville District needs to program more MMs of effort. They do not show any effort in years 68, 69 or 74. It is quite possible that the Ukiah District will need additional MM's for inventory work because of scattered lands and a large demand for development of recreation features. The State Office MM's reflect time needed to:

1. Gather and analyze statistics.

2. Prepare study reports.

3. Accomplish recreation research.

4. Keep the district inventories up to date.

1210- 520 Unit Resource Analysis (See the Unit Resource Analysis Chart) The Bakersfield and Susanville districts should probably spread their U.R.A. over more than one year to allow more time in case of any needed adjustment.

The State Office time is for supervision and evaluation of the U.R.A. in the districts.

1210- 520 Recreation Planning (See the Recreation Planning Chart) Preliminary site plans can become obsolete, that is why just enough effort should be programmed to handle the construction program plus 25% more as a contingency to allow for unforseen circumstances that would not allow us to develop a planned site. All other planning effort should be directed towards

1. Overall district plans.

2. Master plans.

3. Recreation Access Planning

4. Cooperative Planning.

5. Management Plans.

It is felt that the Bakersfield, Susanville and Ukiah Districts will need more MMs to accomplish the total job. The State Office time is for district supervision and to accomplish the extra preliminary site planning in the districts that is required due to added construction projects. State Office time is also required for master plan preparation and special study projects.

1210-530 Recreation Protection (See the Recreation Protection Chart) The Bakersfield District shows 2 to 12 times the effort expended over other districts. This could have been a result of poor criteria to base their needs or a large number of sites needing protection. It would be better if they would show a more gradual increase over the 7 year period. State Office time is for review and supplying technical help (archeologist, etc.) where needed.

2120 Recreation Construction Advance Survey and Design fund allocations limits the districts for a 1969 Construction Program. All districts do not receive 2120 funds in any one year. The dips in the "District Differences Graph" for 030 and 060 in F.Y. 70, reflect the lack of advance funding to continue a consistent program of construction. The dip in the 010 graph for F.Y. 1972 has not been explained as yet. Ukiah (050) shows a beginning from zero in F.Y. 69, peak construction in F.Y. 71, and a decrease in F.Y. 1972. This drop in F.Y. 72 has not yet been explained.

Percentages, by district, of the sites identified by the study scheduled for construction through F.Y. 1974 are:

01 - 64%	02 - 41%	03 - 17%
04 - 17%	05 - 37%	06 - 20%

The "Program Analysis, Recreation Graph" shows that the emphasis by District is on III (Project Development). Considering a construction type program, this is expected. However, the planning (I-Data) must lead construction.

Work by Work Code (Job Numbers)
It was felt that the study of the construction for 2120 could be served by studying the following Job Numbers and Work Codes.

2120 - 200 -	206	Survey
	207	Design
	208	Review
2120 - 420 -	209	Inspection-Administration
	210	Layout

The "State Units & MM Graph" illustrates that the district submissions anticipate a substantial increase in MM for F.Y. 1969 over those for F.Y. 1968. The graph also shows that MMs scheduled in the Job Numbers listed above are not in accordance with the criteria established and the number of units in the current AWP for California. The graph does not include Job Numbers in the "administrative series (Job Nos. 2, 164, 3, 172).

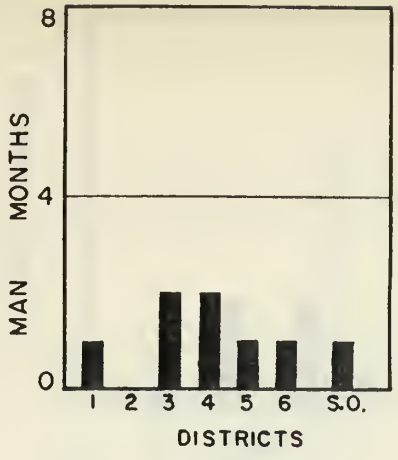
It is suggested that a factor of 1.2 should be applied to 206, 207, 208, 209, 210 for total MM requirements.

MM for cartographic services to support 2120 are covered in the 1800 section. Funding will be by 2120.

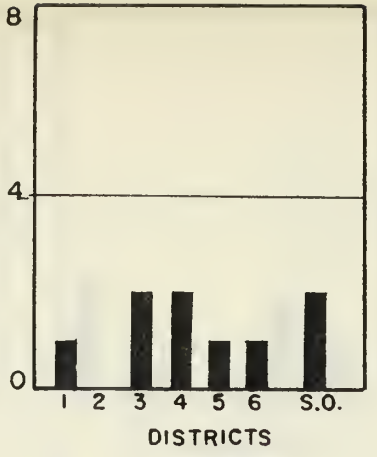
2220 - Recreation Maintenance The abrupt increase in operations in most districts (as shown in the "Recreation-District Operations Chart") between F.Y. 1969 and F.Y. 1970 is that in F.Y. 68 and 69 the districts are operating on actual and projected funds while from F.Y. 1970 and thereafter the districts are assuming they will receive necessary funds to operate and maintain the total units identified in the California Management Study.

The values on the graph are related directly to the amount of construction that has been programmed in each district.

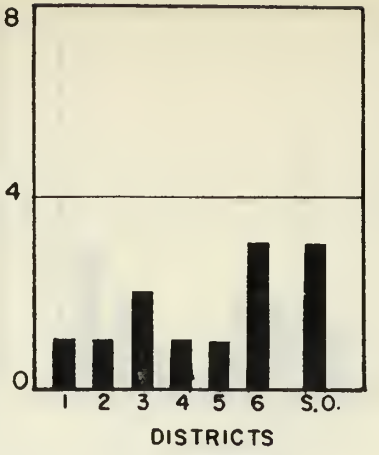
Additional study is necessary to identify more accurately the amount of undeveloped site cleanup in each district. It is safe to say that the Riverside District could have upwards from 2,000 undeveloped family units needing annual cleanup while the California Management Study only indicates less than 100.



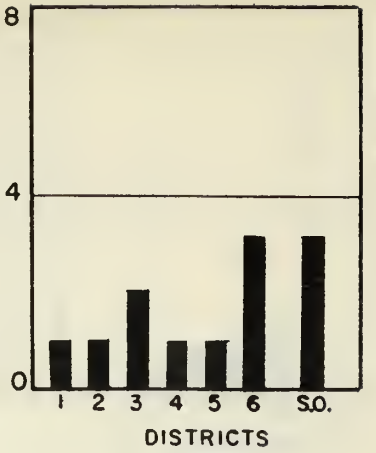
F.Y. 68



F.Y. 69



,Y. 70



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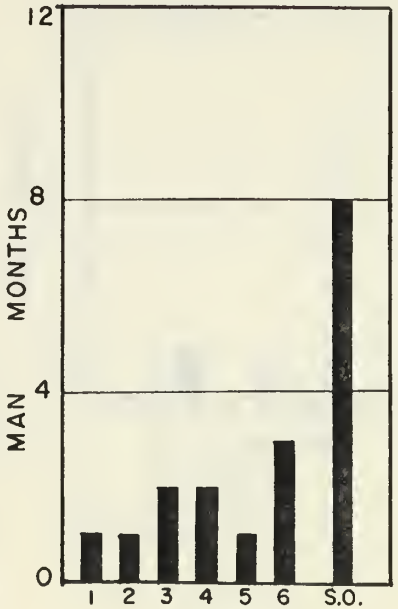

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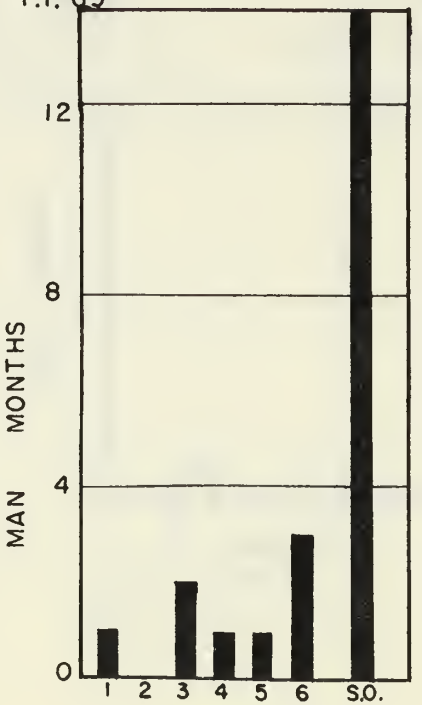

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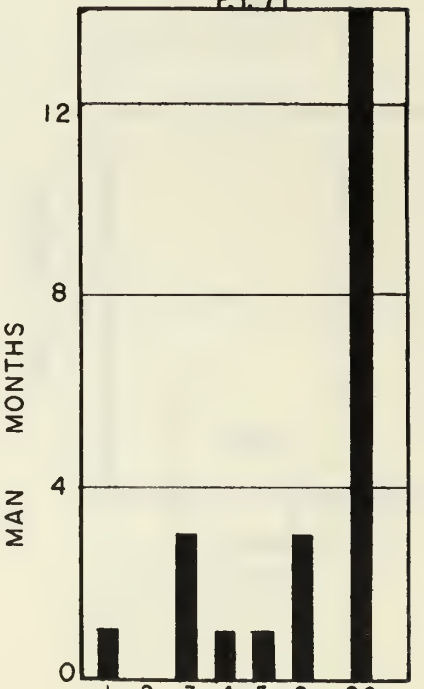
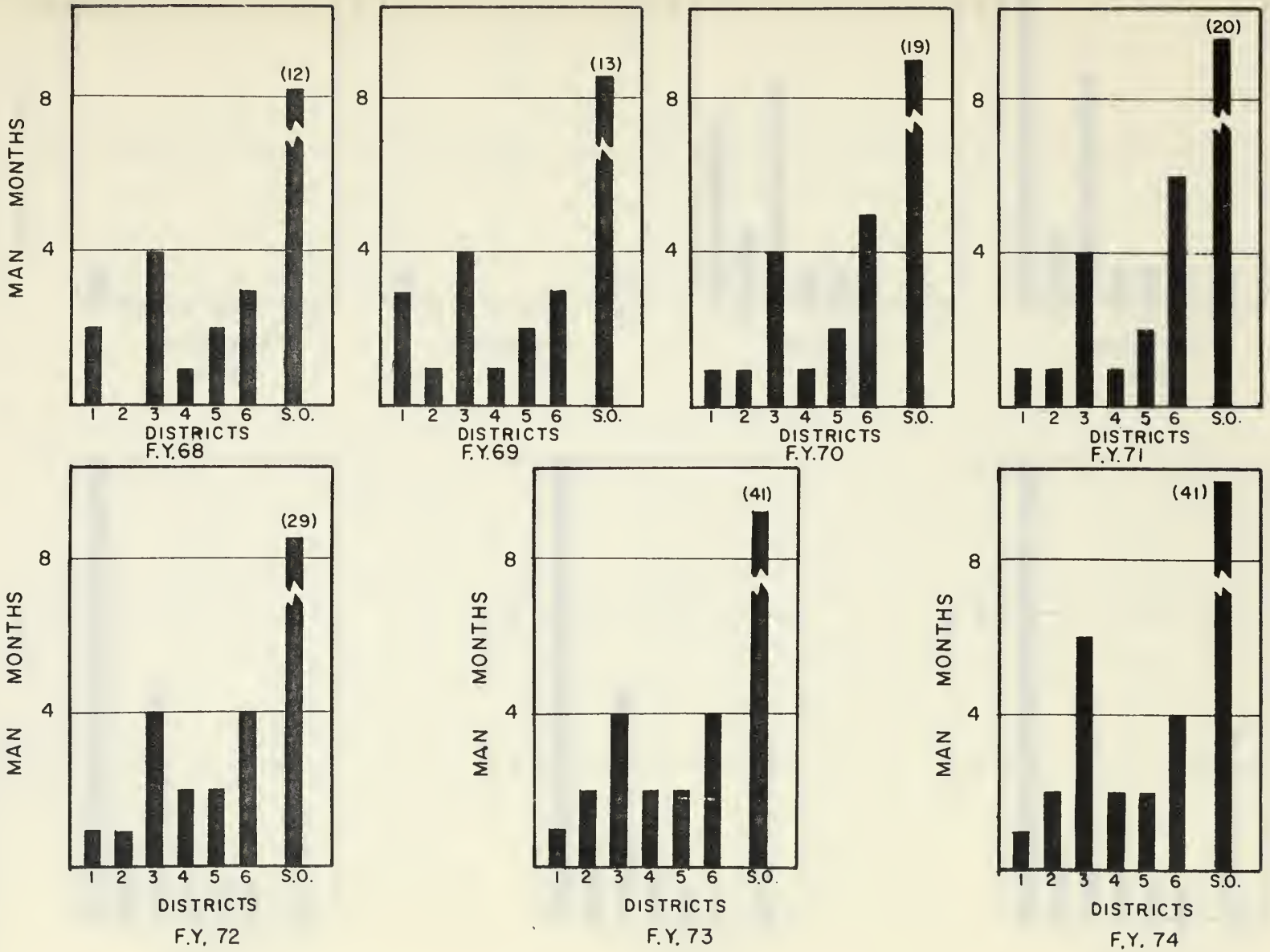


F.Y. 74

CALIFORNIA MANAGEMENT STUDY
RECREATION
UNIT RESOURCE ANALYSIS


MAN MONTHS
8
4
(12)
1 2 3 4 5 6 S.O.
DISTRICTS
F.Y.68
(13)
F.Y.69
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F.Y.71
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F.Y. 72
(41)
F.Y. 73
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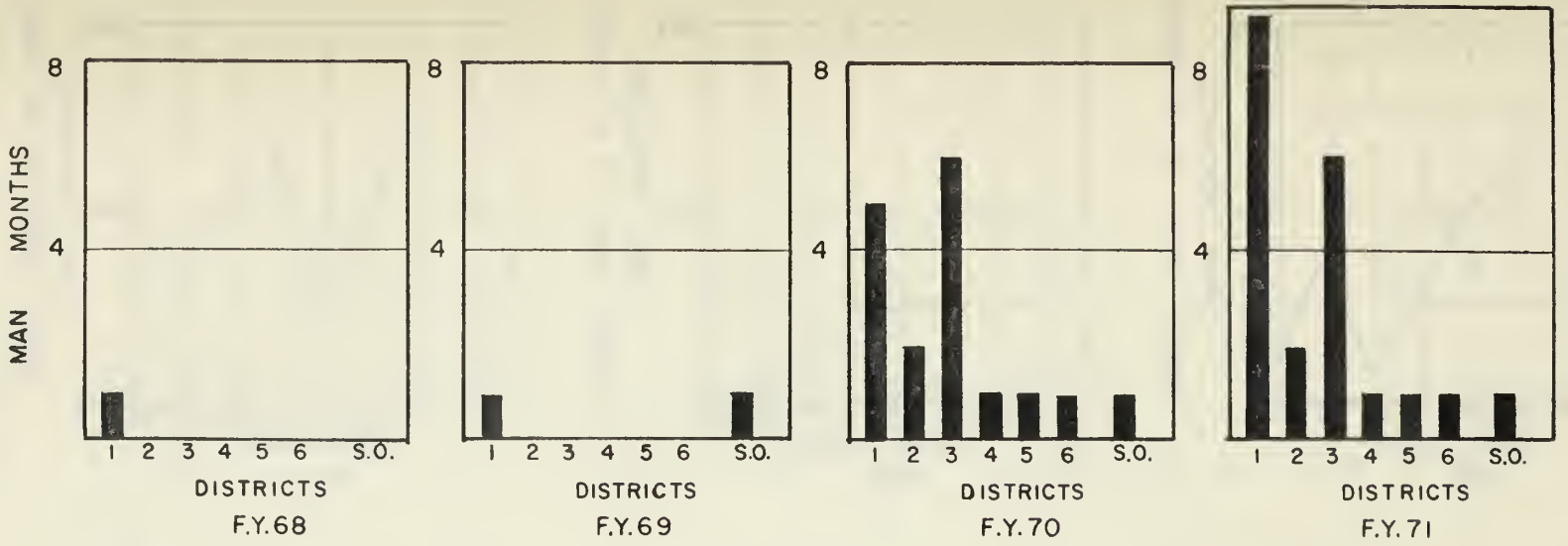
F.Y. 74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MAN MONTHS
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F.Y.68
F.Y.69
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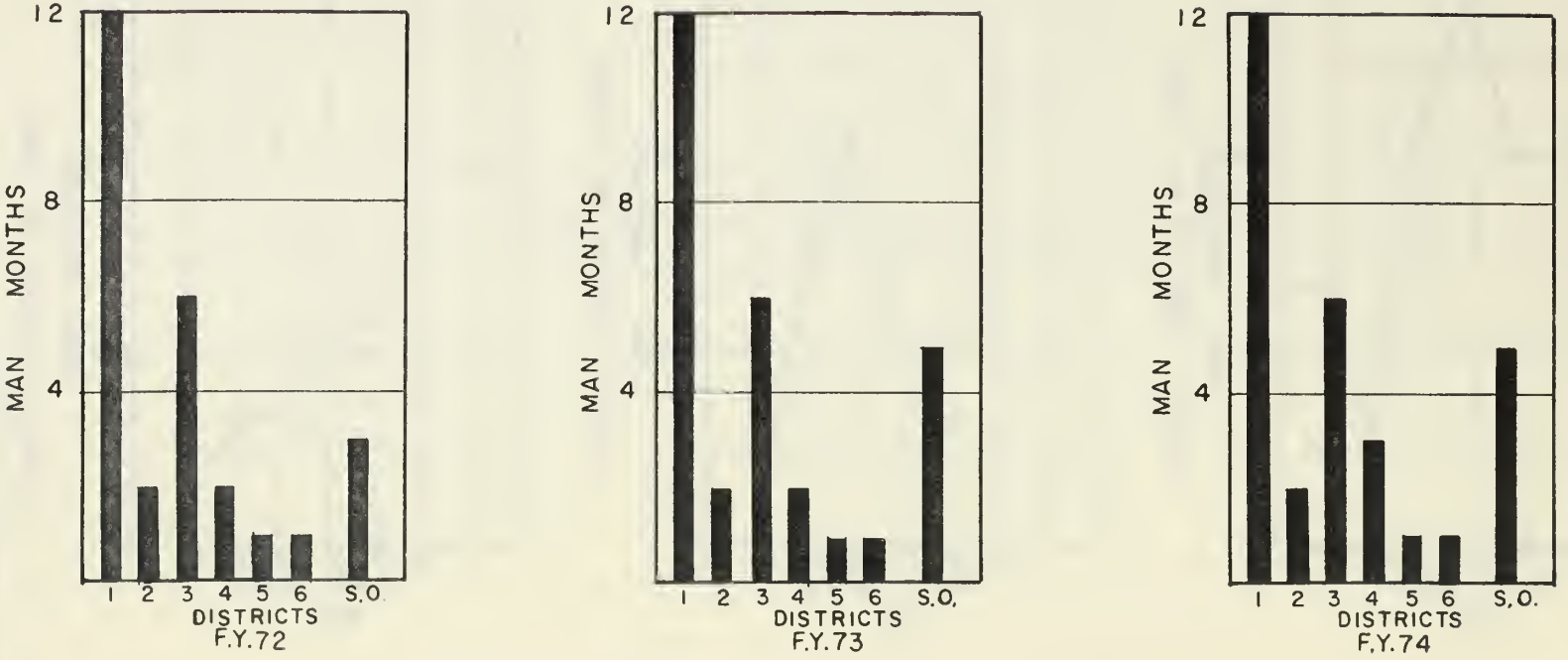
F.Y.71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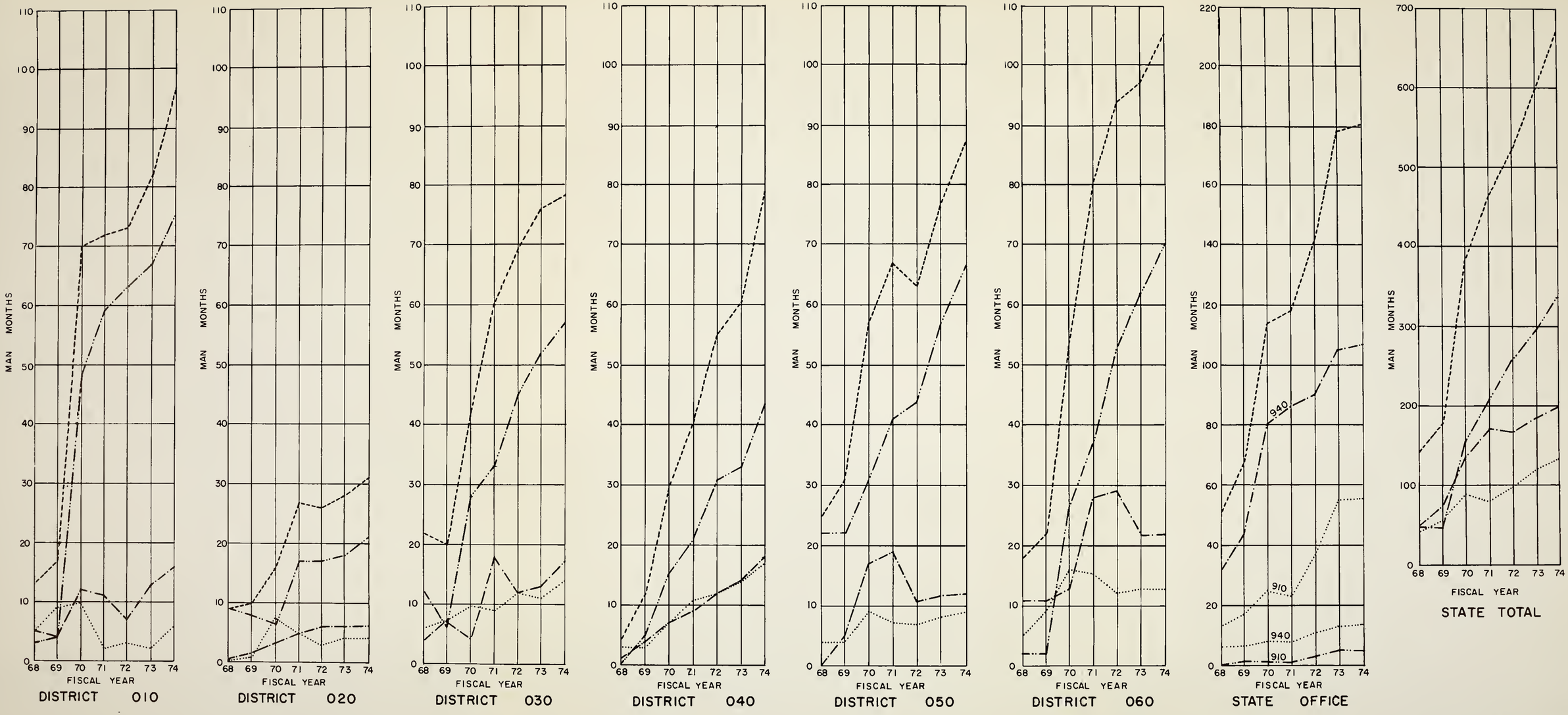
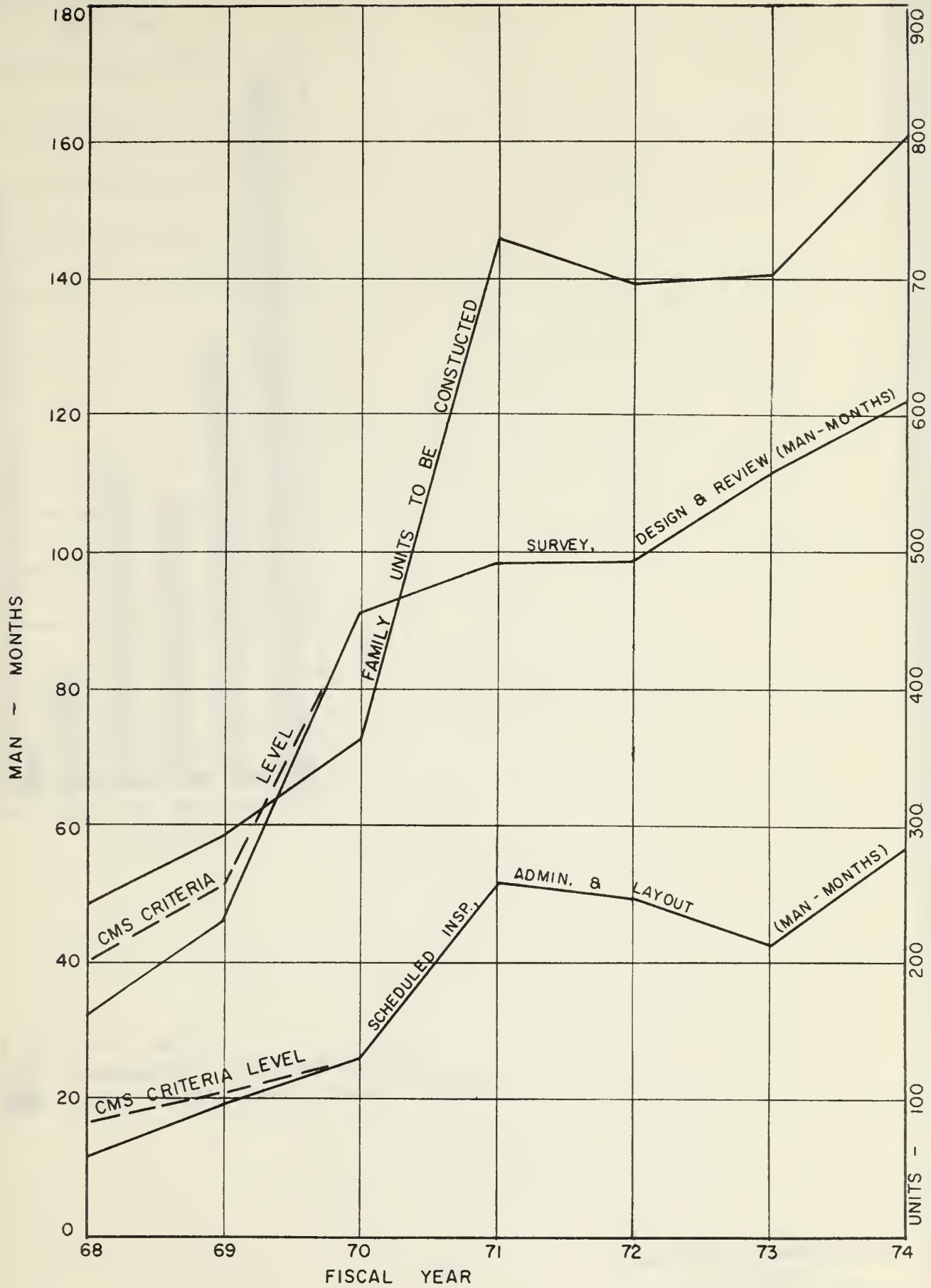
MAN MONTHS
1 2 3 4 5 6 S.O.
DISTRICTS
F.Y.72
F.Y.73
F.Y.74

CALIFORNIA MANAGEMENT STUDY
RECREATION
DISTRICT DIFFERENCES

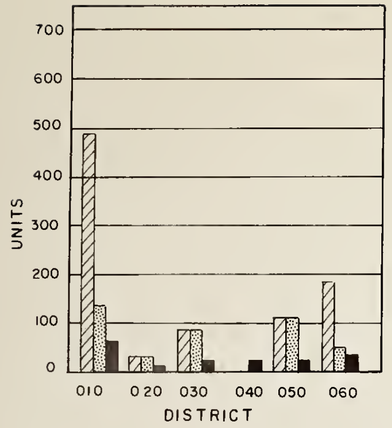


CALIFORNIA MANAGEMENT STUDY
PROGRAM ANALYSIS
RECREATION



CALIFORNIA MANAGEMENT STUDY
RECREATION
STATE UNITS & M.M.

F. Y. 68



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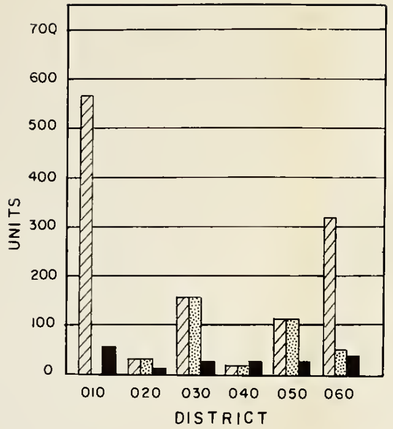

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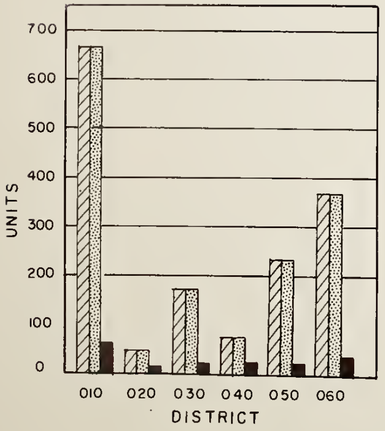

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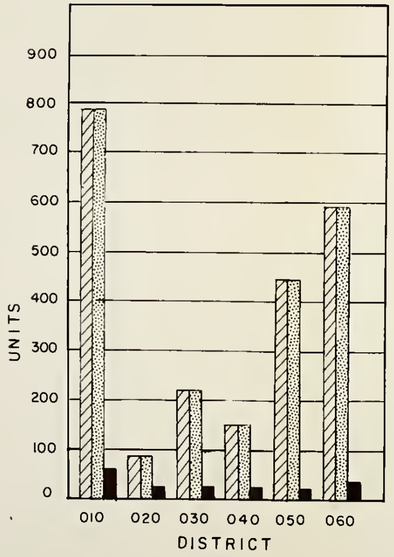

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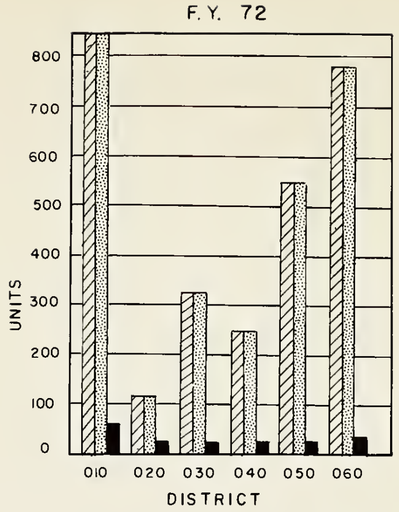

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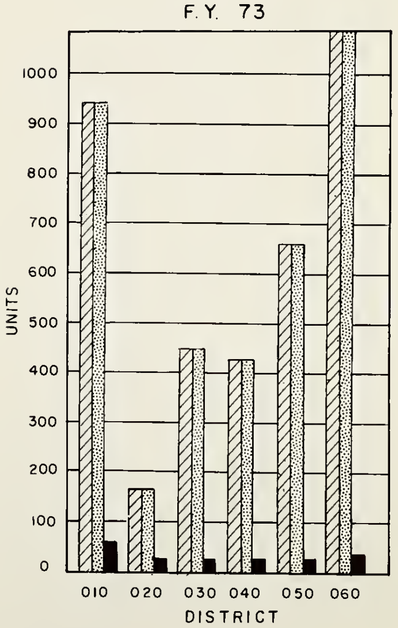

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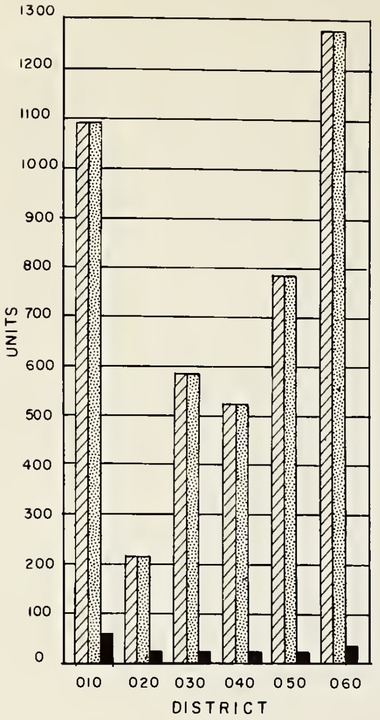


TOTAL UNITS
PROGRAMED UNITS (DEVELOPED)
TOTAL UNDEVELOPED FAMILY UNITS

CALIFORNIA MANAGEMENT STUDY
RECREATION
DISTRICT OPERATIONS

CALIFORNIA MANAGEMENT STUDY

LIVESTOCK MANAGEMENT PROGRAM

A. General Highlights

1. Background: The livestock management program in California has some significant features which merit consideration. It is characterized by contrasts and some contradictions.

Only a little over half the 16 million acres of BLM lands in the state have grazing use authorized on them while grazing is authorized on 100% of the 2 million acres administered by California in the state of Nevada.

Of the approximate 10 million acres of BLM land in California on which grazing use is authorized, a little over half is in grazing districts with the remaining administered under Section 15 grazing leases.

Statewide, livestock production constitutes a major industry; within the state it ranks first in agricultural income and third in the nation. While BLM lands supply only about 1.6% of the forage for this industry, in local areas where public lands predominate they constitute a major force in the local economy. Their importance, therefore, cannot be based solely on this small percentage figure.

Section 15 lands are scattered over the entire state and vary from very small isolated tracts to million or more acre blocks and from relatively poor lands to our most valuable forage producing lands. Competing resource uses are high but from a livestock and watershed management standpoint, considerably less manpower and money have been expended for their administration than has been the case on the grazing district lands.

2. Workload Totals: The management study displays the livestock management program under existing manpower limitations compared with the escalation necessary to meet our full management obligations and long range objectives over the 7 year period of the study. Livestock management is currently undergoing a transition from adjudication to management. Old program objectives are being phased out and new management objectives are being established. In this 7 year study, F.Y.s 1968 and 69 have been programmed under existing manpower and fund limitations that phase out the adjudication in F.Y. 1968 and emphasize management from 1969 on. Beginning in 1970, planning is predicated

on meeting long range management goals with a feasible rate of increase for both the management and development segments of the program.

The Graph "Livestock Management - District by Year" shows the total state jobload as 208 man months for F.Y. 1969, more than doubling to 562 man months in 1970, and then escalating at a somewhat decreasing rate to 990 in 1974. The 1968 and 69 programs are considerably below current needs in most major jobs, including projects. These programs, although completing the top priority job of adjudication by the July 1, 1968 deadline, are very deficient in major management jobs, inventory, supervision and project construction. (See Graph Livestock Management F.Y. 1968, Program Directives, Long Range Plans). The graph just referred to shows the estimated full needs for 1968 as 597 MMs as against an actual program of 249 MM. Subactivity 1220 has a full need for F.Y. 1968 of 270 MM as against an actual program of 176 MM and subactivity 1260 a total need of 315 MM against an actual program of 65 MM.

The three major job categories consisting of data gathering, operations and construction shows a desirable relationship for the state as a whole (Graph "Livestock Management - Program Analysis). All three maintain a similar trend with the operations or overhead load remaining about a third of the total program or about the same as that for data gathering throughout the programming period. The construction category maintains a desirable level compared to data gathering. However, this is distorted by the fact that none of the data gathering jobload in the 1260 activity has been included in this program.

3. Directives and Advices

   a. Livestock Developments (1260): There are no known long term directives or advices setting forth any specific accomplishment goals in livestock projects. F.Y. 1964 AWP directives and the 1966 program advices for the 1260 activity state that the following year's program should be increased by one third.

Current directives of a specific nature are contained in the F.Y. 1968 AWP directives. They provide for completion during F.Y. 1968 for the following tabulated amounts with the programmed amounts likewise tabulated: See also Graph "Livestock Management F.Y. 1968 Program Directives, Long Range Plans".

	1968 Directives	1968 AWP
Brush Control (510)	6,300 Ac.	7,000 Ac.
Fencing (520)	47 Miles	55 Miles (all fencing)
Water Develop (610)	29 ea.	31 ea.
Facilities (700)	3 ea.	11 ea.

b. Range Management (1220): There are two major long term program directives or commitments. The first provides for completion of the adjudication of Section 3 grazing privileges by July 1, 1967. By Director's authorization this date was extended to July 1, 1968. The Bakersfield adjudication was completed by July 1, 1967. Susanville has programmed to complete the job in that district by July 1, 1968.

The second major directive (from F.Y. 1967 AWP Directives) sets up the requirement that AMPs are to be completed for all retained lands by July 1, 1975. Additional directives and instructions supplemental to this one require that all AMPs must provide for primary range studies and allotment evaluation (Inst. Memo. 67-193, BLM Manual 4413.32 and 1967 and 68 AWP Directives). In addition, each AMP must have adequate annual supervision (BLM Manual 4112.15B3c(5) and F.Y. 68 AWP Directives).

The State Director has added the requirement of forage inventory to AMPs on Section 15 lands and approximately 800,000 acres of Sec. 3 lands (Bakersfield). Inventories on Sec. 15 lands are to be completed by the end of F.Y. 1972 and Bakersfield is to complete 2 planning units annually (1968 State Office program advices).

Short term directives in the 1968 AWP fall somewhat below the long term goals above. F.Y. 1968 AWP Directives are tabulated along with the 1968 programmed amount as follows:

	1968 AWP Directives	AWP
AMPs (240)	20 MM, 13 plans, 820,000 Ac.	21 MM, 19 Plans 514,000 Ac.
Adjudication	Complete by 7-1-68	Programmed for completion
Total 1220 MM	198	198

The AWP meets the short term or AWP Directives in all categories except acreage of AMPs. It falls considerably short of our long range objectives (Graph "Livestock Management F.Y. 1968 Program Directives, Long Range Plans"). The Long Range Objectives would require approximately 1,100,000 acres in AMPs, 600,000 acres in Forage Inventory and the required primary range studies, allotment evaluations and supervision to complete the AWP requirements.

The construction program (fences and water development) is essential to provide the necessary base from which the AMPs can be negotiated. This program for F.Y. 1968 is deficient to a greater extent than Range Management and may act to curtail accomplishment in the latter. Graph - "Livestock Management - Program Analysis", shows fences and water developments in 1968 to be only a fraction of full needs.

From 1970 through 1974 program increases reasonably well provide for full needs to meet long range commitment with exception of forage inventories which are not programmed for completion by the 1972 goal.

4. Special Problems: Three special problems peculiar to this program are considered worth review.

The first problem is a temporary one leading to difficulties in programming at the present time. This is particularly true where programs are being planned for future years. The previously mentioned phase out of the adjudication program that has dominated the range management activity for years and the beginning of the management phase has led to a change in program emphasis, resulting in new job definitions and new manual procedures. During this current transition period new

procedures and work definitions are not clearly understood. This results in erroneous job load analysis and misunderstanding as to long time program goals.

A second problem directly related to the above and resulting from it is coordination with other activities. With emphasis now shifting to management and particularly allotment management plans with more intensive management systems, closer coordination with range development, wildlife management and watershed management is mandatory. As a general premise, it can be stated that most AMPs before implementation will require some development work in either water or fencing. Also, coordination with wildlife needs will be required. A shortage of funds in any function can restrict progress in the other. This requires more detail and advance coordination than has heretofor existed.

The third problem is concerned with the differences between our two major range areas, as was discussed briefly under "Background", above. The chief problem exists in the Mediterranean annual - Chaparral zone that is administered by Section 15 grazing leases. The fact that all administrative and construction activities cost at least twice that of the other area and that funds and manpower for Section 15 lease administration have been proportionately less than grazing district administration has placed this zone an estimated ten years behind in management. Most of these annual type lands lie within the central California drainage system. They have high value for wildlife and watershed development potential. A major effort will be required to bring these lands up to the same management status as those under Section 3 administration. A contributing complexity of this zone is the vegetation itself. The generally accepted principles of management for this area are entirely different from perennial Great Basin, mountain or desert types. A scarcity of research data complicates administration of this zone.

5. Conclusions and Recommendations:

   a. The F.Y. 1968 AWP for livestock management meets all 1968 AWP specific directives except the acreage requirement for AMPs.

b. The F.Y. 1968 AWP falls far short of that needed to meet long time objectives and maintain a desirable operational level. Manpower requirements for sub-activity 1220 should be increased by 54% and the project program, 1260 increased from 4 to 5 times.

c. Long Range Goals in management are so closely meshed with the 1260 construction program, that the money needs for both must be analyzed before realistic long time goals can be established or programmed.

d. The livestock management program for Section 15 lands is considerably behind that for lands inside grazing districts. Future programming should emphasize the Section 15 lands so far as practicable.

e. The unit cost of accomplishment on Sec. 15 lands is considerably more than for grazing district lands. This fact must be considered properly in programming.

f. Misinterpretation of job definitions and workload requirements by the districts in the Resource data categories has led to some inaccuracy in arriving at total and annual job loads. These definitions should be clarified and redefined where necessary.

CALIFORNIA MANAGEMENT STUDY

LIVESTOCK MANAGEMENT PROGRAM

B. Comments on District Submission

1. Regional Workload Differences:

Regional workload differences in livestock management break pretty much between the Great Basin - Mojave Desert and the Mediterranean-annual-Chaparral vegetation zones. The Great Basin-Mojave Desert area lies east of the Sierra Nevada Mountain Range occupying a rather narrow strip along the eastern extremity of the state and the southeast portion. This area is characterized by larger solid blocks of public lands in which livestock grazing constitutes a major endeavor in the local economy. Population is generally more sparse and competing uses of the public lands less intense. Costs per unit of accomplishment in both range management and project work run half or less than half of the Mediterranean-annual-chaparral area. About two thirds of the livestock program is within this area and is included in the Susanville, and most of the Bakersfield and Riverside Districts.

The Mediterranean-annual-chaparral area occupies most of California from the west foothills of the Sierra-Nevada range westward to the coast. The public lands for the most part are situated in the foothill or mountainous areas. They are commonly in small to moderate sized isolated tracts. Although livestock grazing in this general area is a major industry, the importance or contribution of the public lands thereto is considerably less than in the other zone. Here the competing uses particularly by wildlife and recreation is high. Population density for the overall area is high and the problems arising therefrom are common in administering grazing use. All grazing use is administered by Sec. 15 leases and situated in the Redding, Folsom and Ukiah districts and in relatively small parts of the Bakersfield and Riverside Districts. A characteristic of this area is the high costs of administration;in almost all categories of the program it comprises about a third or less of the state livestock grazing program in money and manpower but only about 15% of the acreage of public lands upon which grazing use is authorized.

2. District Workload Differences

The individual total District programs (Graph - "Livestock Management District by Year") in a general way follow a graphic pattern from 1968 thru 1974 similar to that of the overall state. Three districts topped out with maximum or full programs in 1972 or 73 while the other three escalated programs through 1974. The ratio of project work to range management for the state as a whole is roughly 1 to 3 in 1968. This ratio decreases slightly through the program period to 1 to 2 in 1974 showing a need to increase project work at a faster pace than management. The individual districts generally follow the same pattern.

On a district basis livestock management is the major program in the Susanville district. It is one of two major programs in Bakersfield and Riverside and a minor program in Redding, Sacramento and Ukiah Districts (Graph - "Livestock Management, District by Year" and "Year by District").

On a man month basis the following is a tabulation of the Workload by Districts for the years 1969 and 1974.

	1969	1974
Bakersfield	40	220
Susanville	68	315
Redding	20	47
Folsom	25	199
Ukiah	11	42
Riverside	30	132

From this table and consideration of the fact that the administration of Sec. 15 lands is more expensive and somewhat behind that of grazing district lands, it is apparent that Redding, Ukiah and Riverside have taken a more conservative course in estimating a full needs program than the other three districts.

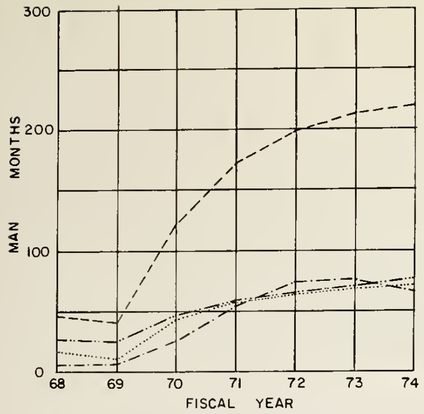
3. District Inconsistencies

Graphs or tabulations were not prepared to reveal inconsistencies or misinterpretations in instructions between the districts. However, individual district reports show considerable variation in their treatment of recurrent vs nonrecurrent job loads. This is particularly notable in the management study categories and has resulted in incorrect job load programing in some cases. Already mentioned is the fact that our current phasing out of the adjudication program and emphasis of the management categories has resulted in new job

definitions that are not as yet fully understood or uniformly interpreted by the districts. Here again there are inconsistencies between districts particularly in the job load analysis of the management study phase of the Livestock Management Program.

4. Specific Jobload Comments

Forage inventories should be programed for completion at least one or two years ahead of A.M.P's. The State Office has established a goal of 1972. Some districts and particularly Bakersfield have shown a substantial amount of this job remaining after 1974. Also, it does not appear that Bakersfield has programed for inventory of any of their Sec. 15 lands.



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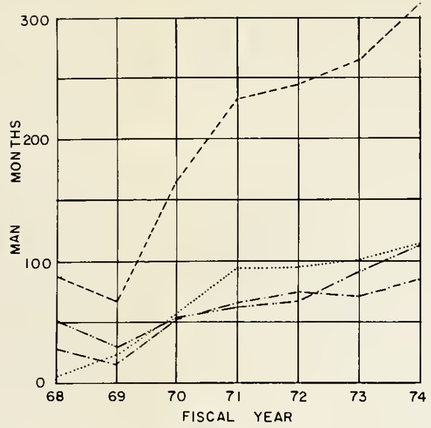

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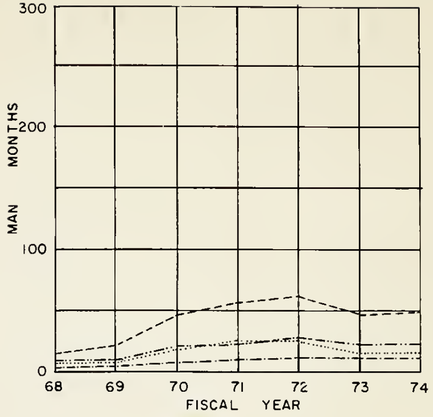

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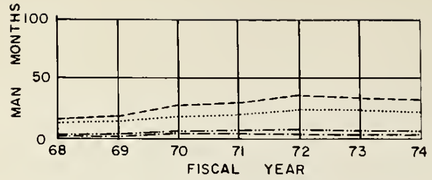

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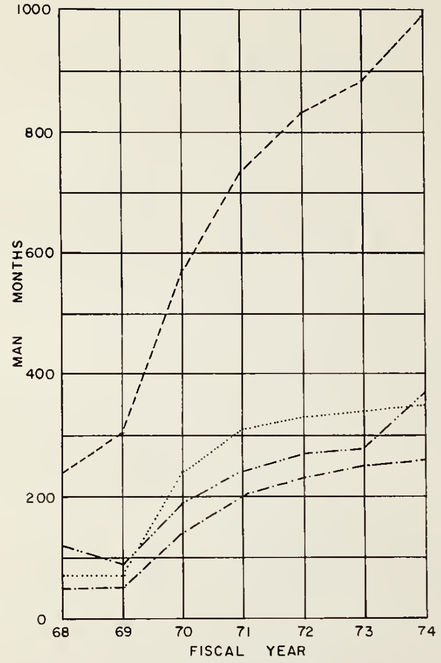

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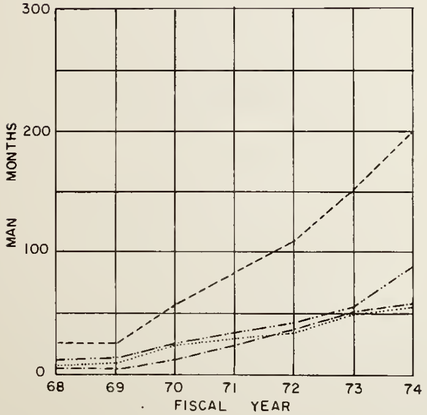

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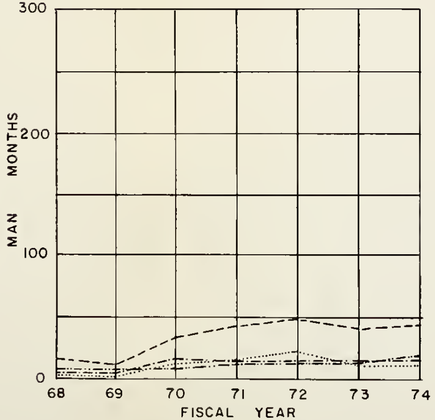

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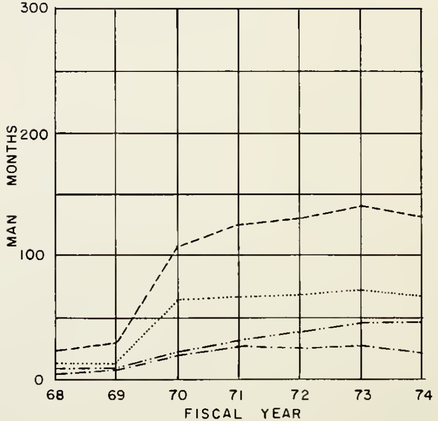
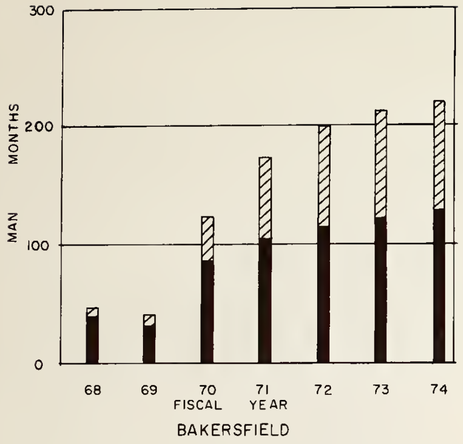


DISTRICT 060

TOTAL
RESOURCE DATA
PROJECT DEVELOPMENT
OPERATIONS

CALIFORNIA MANAGEMENT STUDY
PROGRAM ANALYSIS
LIVESTOCK MANAGEMENT
GRAPH 5



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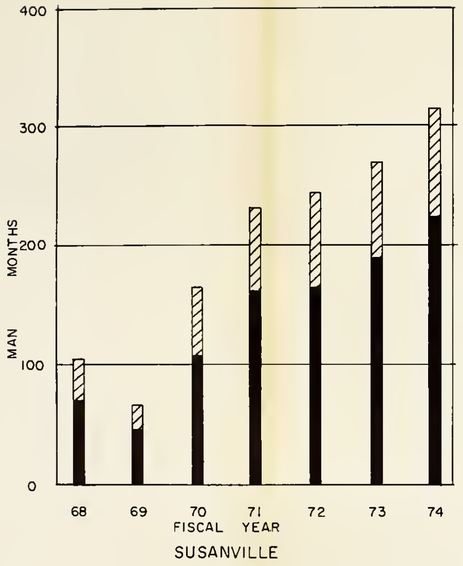
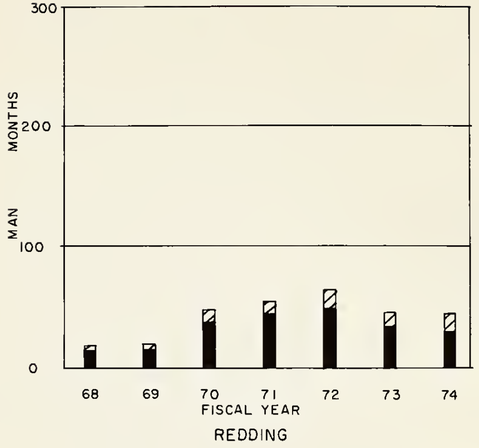


SUSANVILLE

LEGEND

1220
1260
1400
1800



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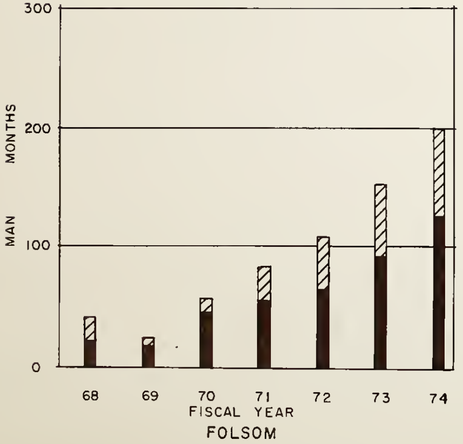
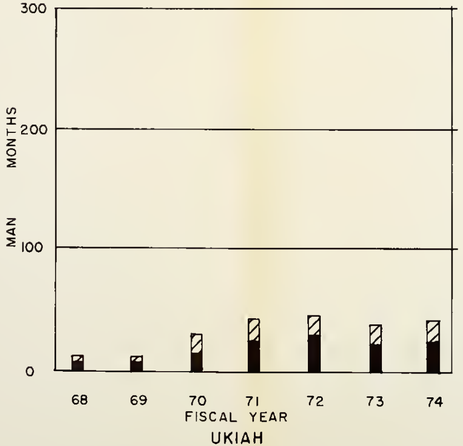
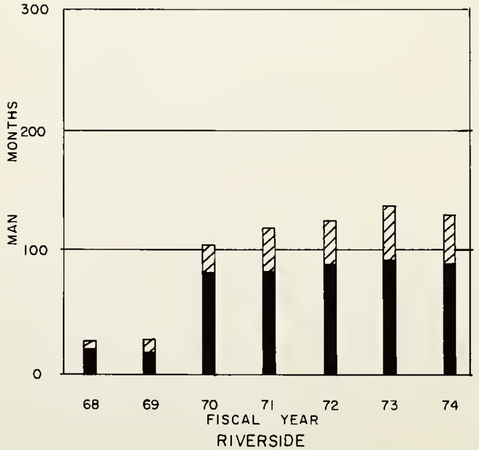


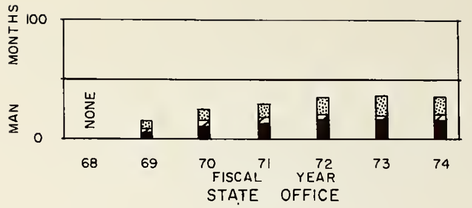
FOLSOM



UKIAH



RIVERSIDE



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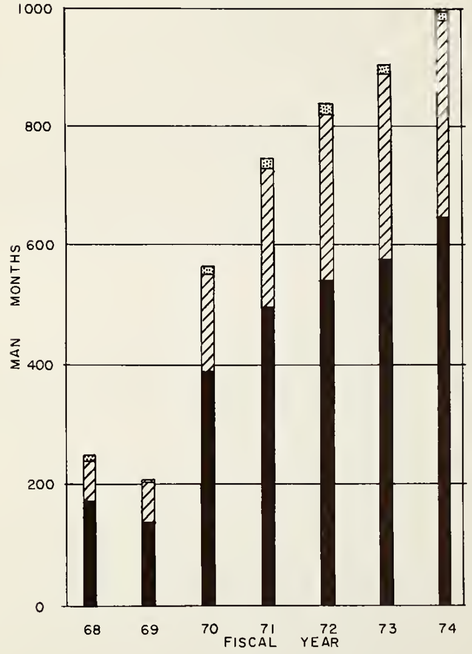
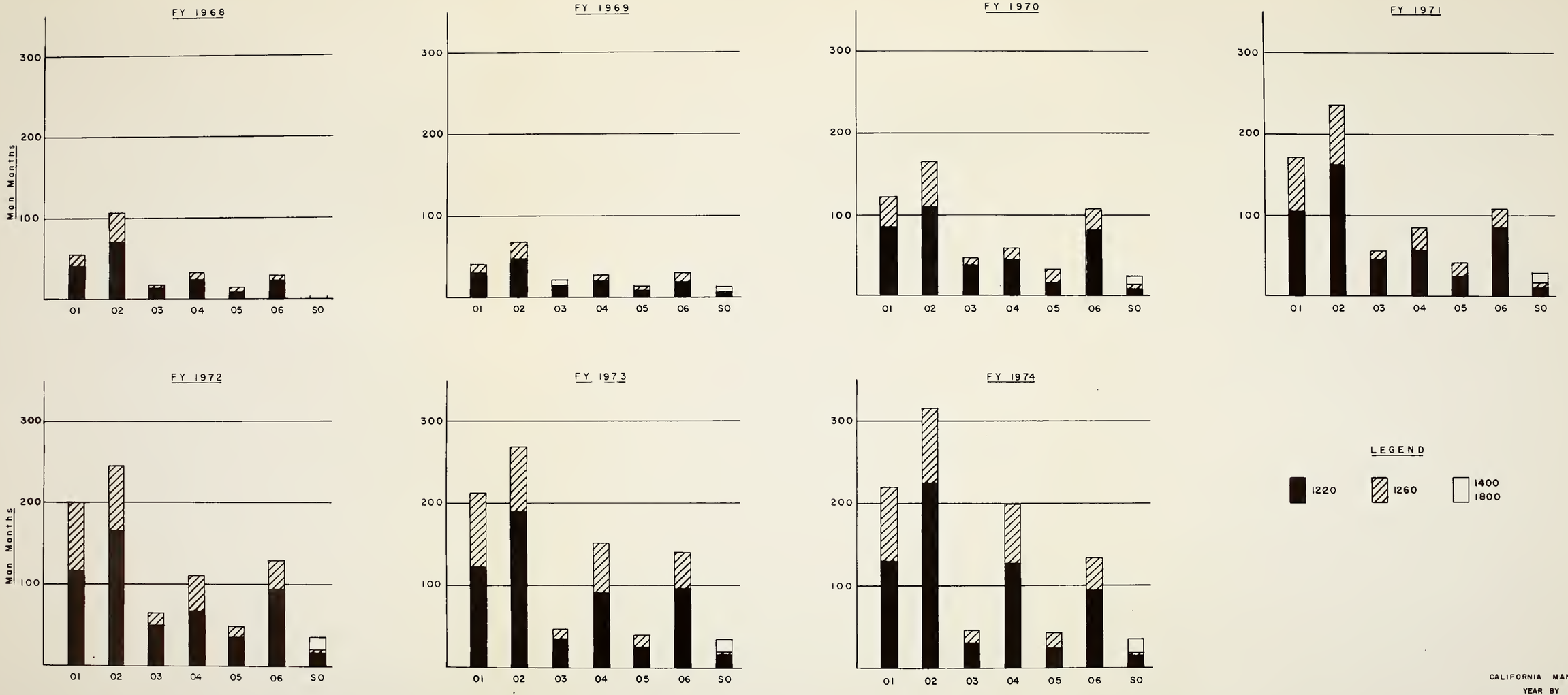
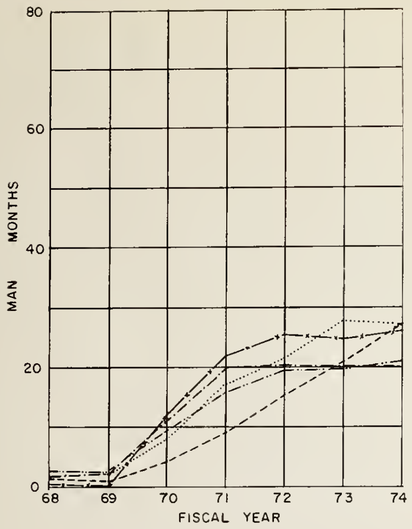


STATE TOTAL

CALIFORNIA MANAGEMENT STUDY
DISTRICT BY YEAR
LIVESTOCK MANAGEMENT
GRAPH 1



CALIFORNIA MANAGEMENT STUDY
YEAR BY DISTRICT
LIVESTOCK MANAGEMENT
GRAPH 2



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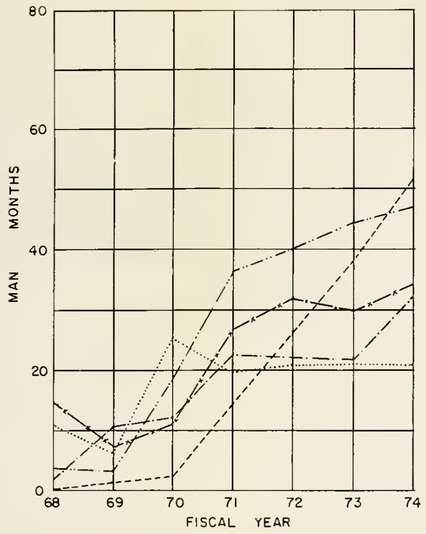
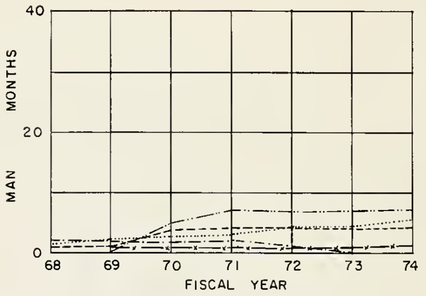


DISTRICT 020

LEGEND

41 PRIOR RANGE STUDIES (220)
55 ALLOTM'T EVALUATION
52 ALLOTMENT MNGM'T PLANS
94-169 FENCE CONSTRUCTION
53 ALLOTM'T MNGM'T PLAN SUPERVISION
99-102 WATER DEVELOPM'T



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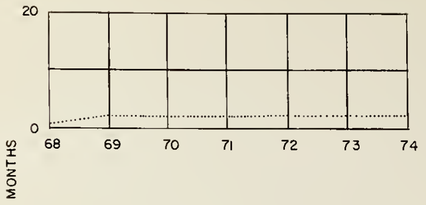

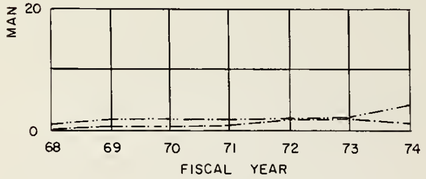

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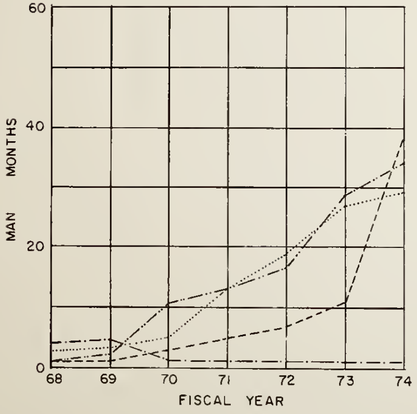

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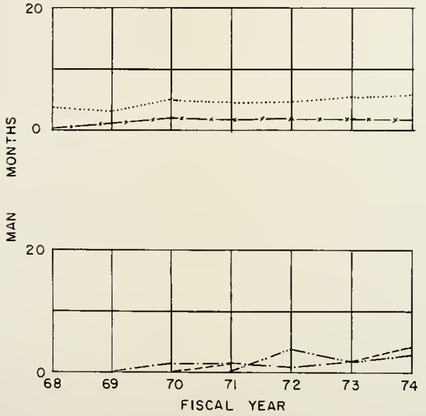

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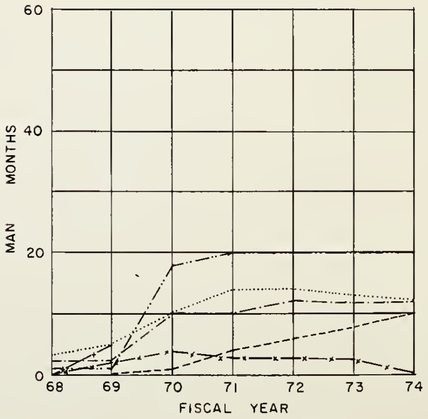

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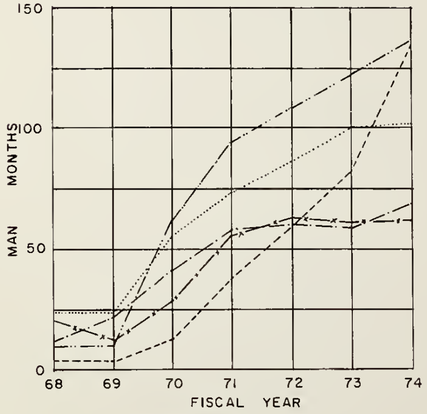
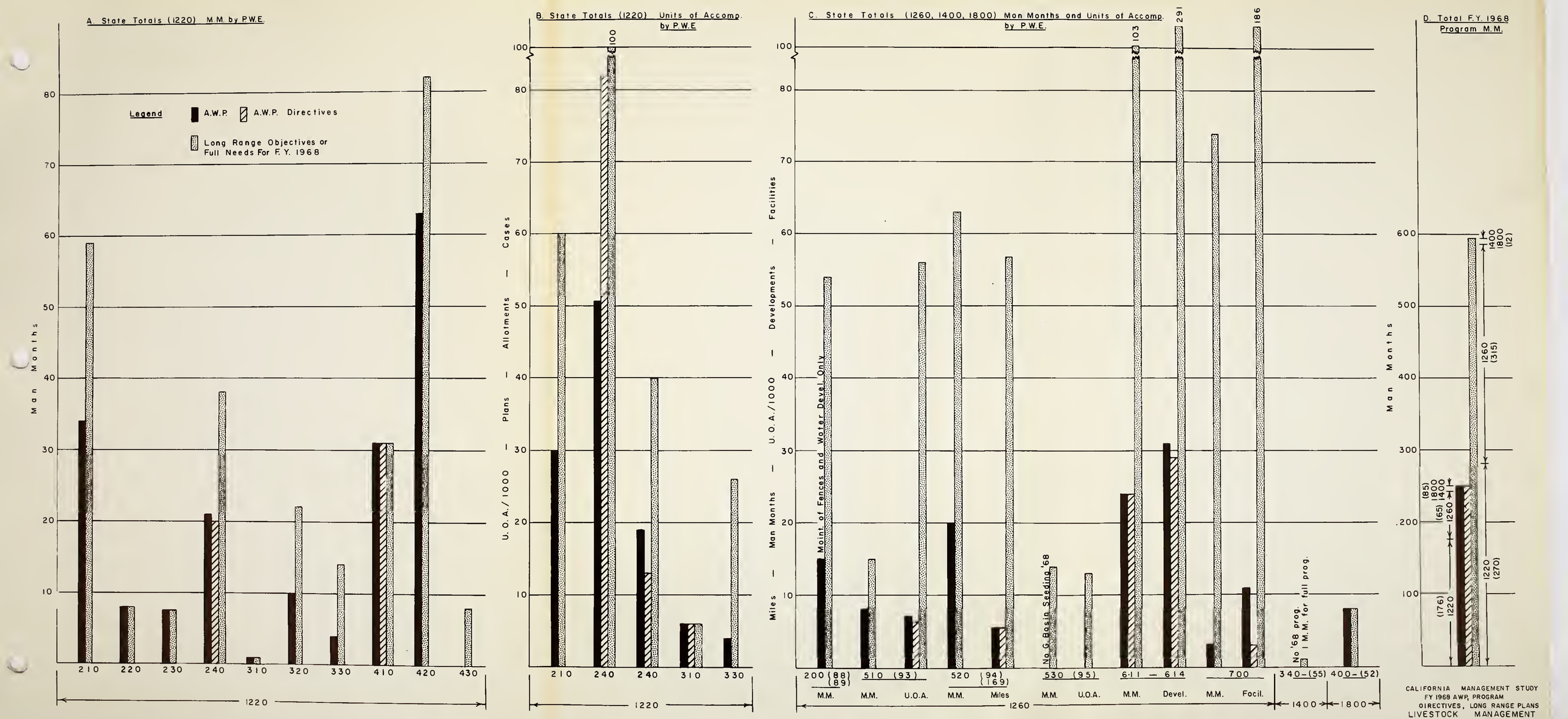


STATE TOTAL

CALIFORNIA MANAGEMENT STUDY
JOB LOAD ANALYSIS
LIVESTOCK MANAGEMENT
GRAPH 3



CALIFORNIA MANAGEMENT STUDY
FY 1968 AWP, PROGRAM
DIRECTIVES, LONG RANGE PLANS
LIVESTOCK MANAGEMENT
GRAPH 4

CALIFORNIA MANAGEMENT STUDY

WILDLIFE PROGRAM

A. General Highlights

The BLM Wildlife Program has barely been started in California. Progress has been made the past few years but a solid foundation has not been built. This Management Study shows the tremendous need for increased manpower to accomplish the wildlife program goals. Manpower is needed in the districts to build a foundation and meet the demands of such a program in California.

1. Workload Totals

Districts estimate that MMs must increase from 76 in FY 68 to 309 in FY 74 to develop a full wildlife habitat management and development program. About 60 per cent of the annual work, after FY 68, would be on management efforts and 40 per cent on habitat development projects. Sound management planning is of first priority. This must be done before a sound program of habitat development projects can be initiated.

Of key immediate need is work on inventories, studies and planning. They need to be emphasized. The districts list a total of 9,180,000 acres in need of inventorying. Habitat management plans are basic if BLM is to develop a sound wildlife management program. To develop these plans detailed information is needed. Most of this must come from inventories and studies.

The graph "Wildlife Mgt. & Development - Total Program" shows the districts and state totals by years. Also shown is the division between wildlife management (1220 & 1240) and habitat development (1260 & 1900). The 1900 is reimbursable wildlife mitigation work on water projects. This shows the large increase needed in the wildlife program, as evaluated by the districts.

The "Wildlife Management" graph shows the MMs planned for inventory, studies, planning and coordination by district and state total. This does not tell the full story for actual planning, job 60, however. Total MMs for this job are insufficient to accomplish the basic planning. They

should be increased until many of the habitat management plans are developed. Coordination, both interagency and interactivity, is essential. There is an increasing workload in this. More emphasis must be given to forestry-wildlife coordination efforts for instance.

The table "Wildlife Habitat Mgt. - Total Work" shows a summary of district and state workloads for non-recurrent jobs. These are district estimates based on the best information available. Some may be too high or too low. They emphasize the need for inventories and plans to develop better data.

The table shows a need for 124,000 acres of food and cover development, exclusive of pond and marsh development, 674 miles of fencing, 4,037 units of water development and 182 fish habitat projects. Even though refinements to this table are needed, it does indicate the large workload ahead.

The graph "Wildlife Habitat Development - State Totals" gives the units and MMs for four major categories. These are Food & Cover Developments, Water Developments, Fencing, and Fish Habitat. Different criteria for jobs effects the relationship of the two graph lines for units and MMs. Two other graphs on habitat development, one on food and cover, and the other on water projects, show the relationship of total work planned for the FY 68-74 period and the total estimated job. About 32 per cent of the food and cover developments and 35 per cent of the water developments would be accomplished.

2. Directives and Advices

Program Guidance: (BLM Manual 1603) - Five year Goals FY 69-73: Inventory and improve wildlife habitat for rare and endangered species. Provide 9 million annual visitor days of hunting and 6 million annual visitor days of fishing by improving two million acres of fish and wildlife habitat. Maintain and improve anadromous fish habitat.

Priorities: Develop wildlife habitat protection, improvement, and management plans, expecially for rare and endangered species. Improve wildlife habitat in areas of poor or declining condition, where sport fishing and hunting demand exceeds supply, and where harvest regulations are adequate. Habitat improvement through management is favored. Provide public access.

Complete resource inventory and analysis sufficient to support the Bureau's Planning System.

Inventory: Update inventory of important wildlife habitat, potential fishing reservoir sites, and habitat of rare and endangered species. (FY 66 & 68 AWP Dir., FY 67 & 69 Prog. Ad.). Rare and endangered species inventory. (IM 67-165) and W.O. memo on California FY 68 AWP 9-1-67.

Studies: Initiate wildlife use studies on key habitat areas not presently covered by studies. Continue emphasis on studies (FY 69 Prog. Ad. & FY 68 AWP Dir. Also similar directives in FY 66 & 67 AWP Dir. and FY 67 & 68 Prog. Ad.).

Planning: Start development of a wildlife management plan on one priority area (FY 66 AWP Dir.) Completed the plan started in FY 66 (FY 67 AWP Dir.) Continue emphasis on planning (FY 68 AWP Dir.) Identify areas needing access and plan access (FY 67, 68, & 69 Prog. Ad. and FY 67 & 68 AWP Dir.) Wild Horse Policy (IM 67-361) Requires development of a management plan.

Coordination: Continue coordination efforts (FY 68 Prog. Ad. and FY 67 AWP Dir.). Emphasize coordination efforts (FY 69 Prog. Ad.). Interagency and interactivity coordination is essential (FY 68 AWP Dir.).

Analysis: FY 68 Directives compared with manpower on hand.

	Estimated MMs Required By FY 68 AWP Dir. & Prog. Ad.	MM Available 68 AWP
1220 & 1240		
Planning	30 MM	17 MM
Coordination	12 "	6 "
Studies	12 "	2 "
Inventory	14 "	4 "
	68 MM	29 MM
1260		
Habitat Development	39 MM	42 MM
Total	107 MM	71 MM

The estimated MMs in FY 68 needed to accomplish the work in management ordered by Washington are conservative. These MMs would only make a start toward the necessary work. It is readily apparent that California is short in manpower and funds for this primary part of the wildlife management program. If this continues we will be unable to meet the Bureau wildlife management goals and the Washington directives.

3. Special Problems

The major problem in developing a wildlife management program in California is manpower. One part of the problem is the lack of a technically trained wildlife biologist on the Ukiah District staff. All other districts have at least one such man on their staff, although not classified as such except in one district. The other part of the problem is the lack of sufficient budgeted MMs for a wildlife biologist in districts where a trained man is present. The staffing must be increased in these districts, even if wildlife funds for MMs become available, to relieve such men of their other duties. A full time wildlife biologist is needed for each district as soon as possible.

Because of the Section 15 districts, California has far fewer range personnel than other states. In other states it has evidently been possible for them to convert positions from range conservationists to district wildlife specialists. We have been able to do this in only one district in California. To place a wildlife specialist in our districts we must have both additional position ceiling and funds.

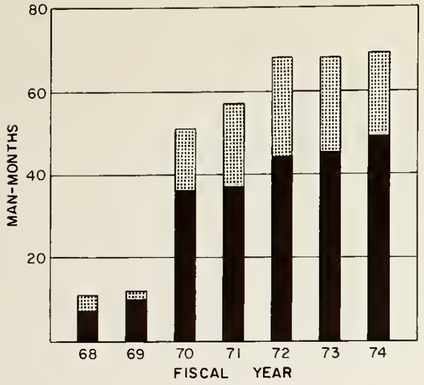
A specific problem is the feral burro in California. This is covered elsewhere in detail. It will require considerable interagency effort to solve.

Another problem is the present division of the wildlife program in several different activities. These are 1220, 1240 and 1260. This also is covered elsewhere in detail. There should be one activity for this program.

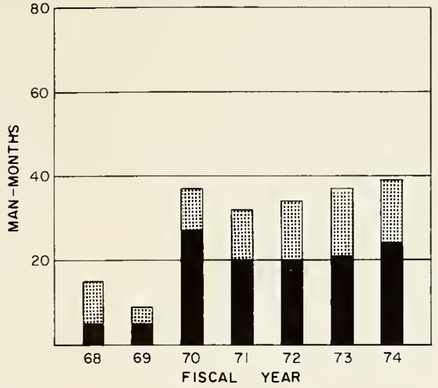
4. Conclusions and Recommendations

a. There is an immediate need for district wildlife biologists to work on developing a wildlife habitat management program for BLM in California. The CMS shows a tremendous workload in this field.

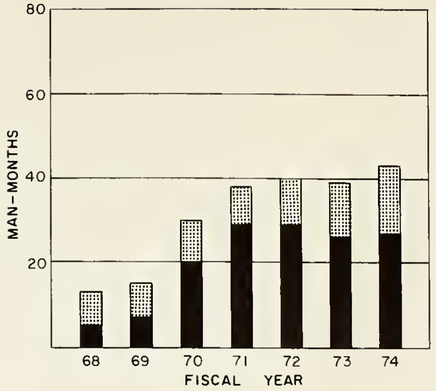
b. Management facets, such as inventories, studies, plans, and coordination must be emphasized first. The CMS shows a large workload in habitat development projects. However, at present, insufficient knowledge is available to conduct wisely a large development program. Habitat management plans and specific project plans must be made first. In this way habitat development projects will be used to help meet specific needs and objectives.



BAKERSFIELD



SUSANVILLE



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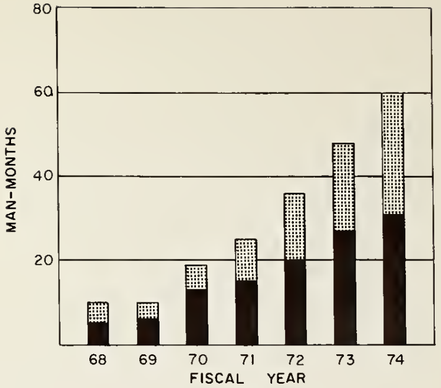

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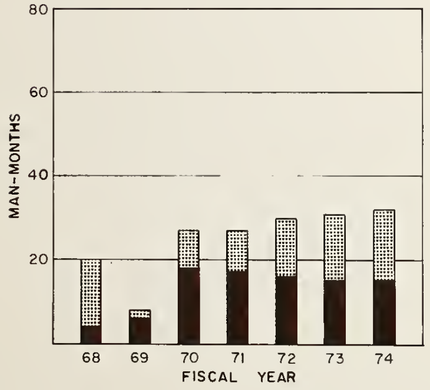

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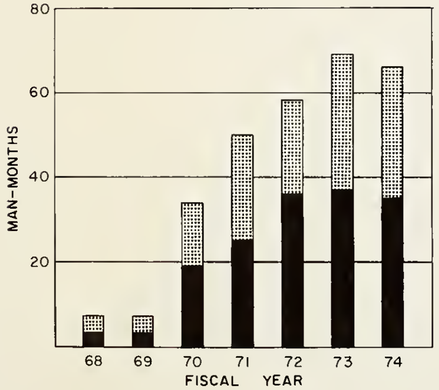

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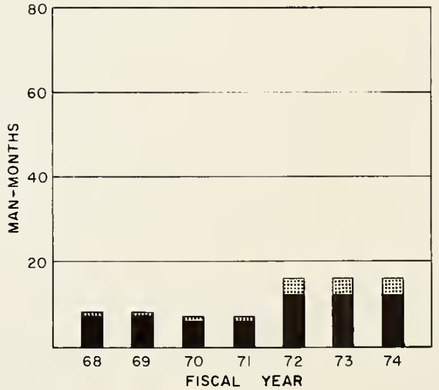

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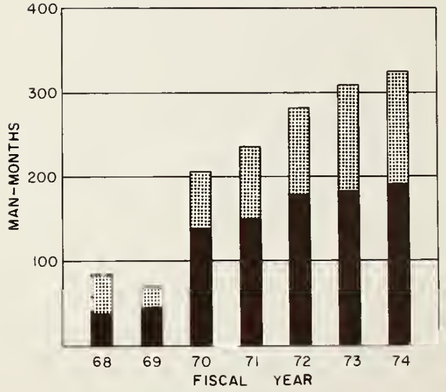
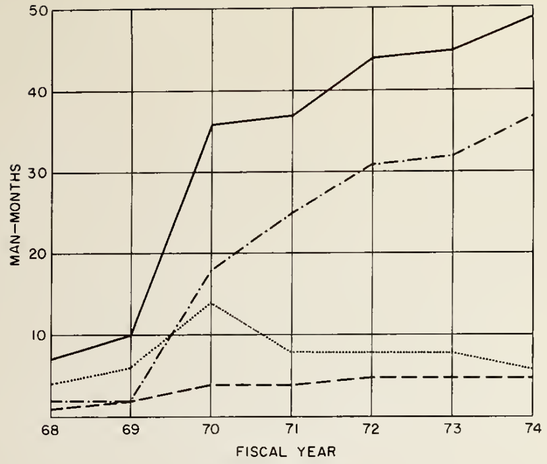


STATE TOTAL

MANAGEMENT 1220 & 1240

DEVELOPMENT 1260 & 1900

CALIFORNIA MANAGEMENT STUDY
1220, 1240, 1260, & 1900
TOTAL PROGRAM
WILDLIFE MANAGEMENT
AND DEVELOPMENT



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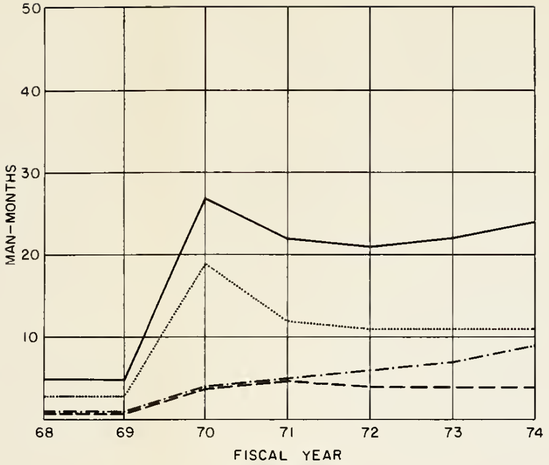

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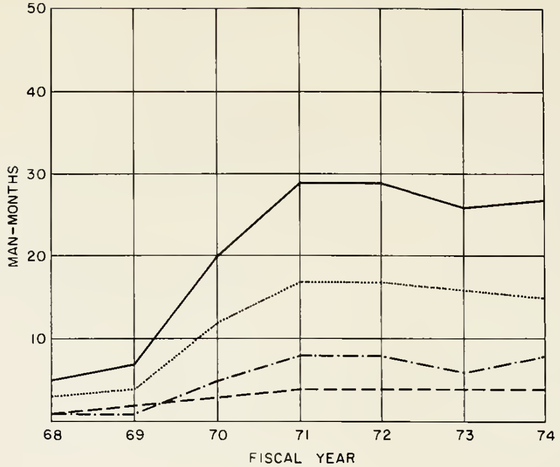

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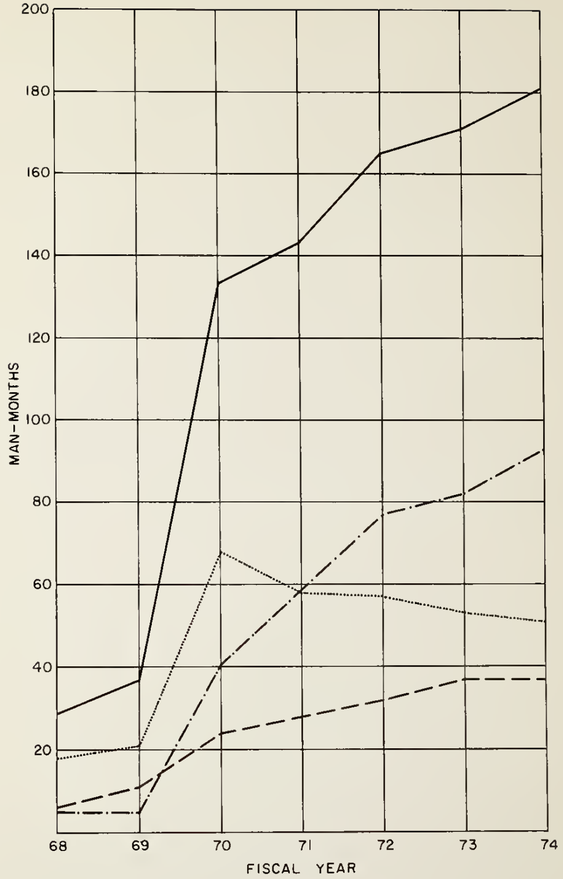
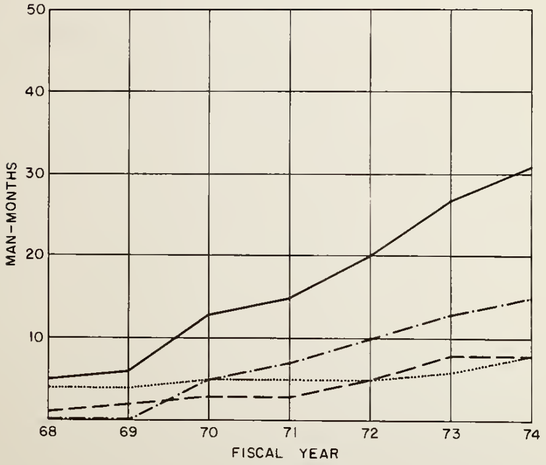


TOTAL



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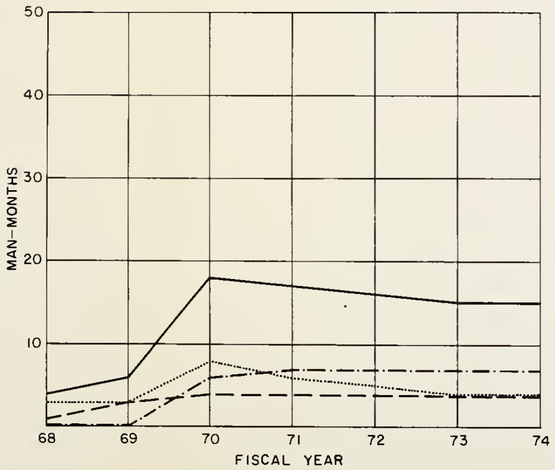

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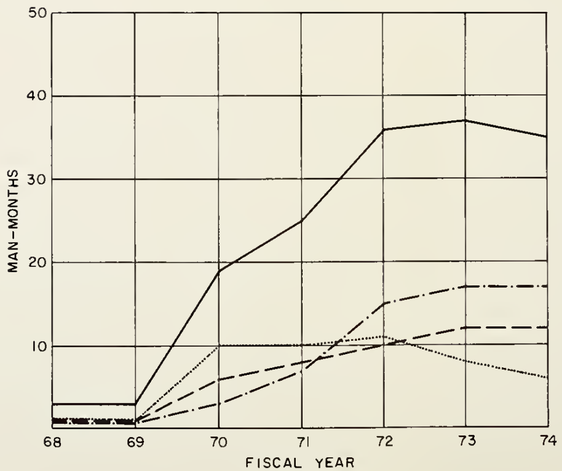


RIVERSIDE

PLANS — 1220 & 1240
COORDINATION — 1220
STUDIES & INVENTORY — 1220 & 1240
TOTAL

CALIFORNIA MANAGEMENT STUDY

1220 & 1240

WILDLIFE MANAGEMENT

WILDLIFE HABITAT MANAGEMENT - TOTAL WORK

Job No.	Work Category	Unit	01	02	03	04	05	06	Total
1220-810									
50	Access	Cases	20	40	250	--	--	55	365
33	URA	Planning Unit	15	11	9	8	10	15	68
1220-830									
157	Inv. - Great Basin & Desert	1,000 acres	1800	3000	100	--	--	2400	7300
167	Inv. - Chaparral & Annual	1,000 acres	700	--	200	430	450	100	1880
1260-800									
811 -93	Brush Control	100 Acres	20	300	100	--	--	--	420
812 -95	Seeding - Great Basin & Desert	100 Acres	60	25	5	--	--	40	130
96	Seeding - Chaparral	100 Acres	8	--	12	130	390	6	546
813 -173	Planting	Acre	3000	8000	200	300	1500	1400	14,400
	Subtotal - Food & Cover	Acres	11800	40500	11900	13300	40500	6000	124,000
814 -174	Pond & Marsh Develop.	Projects	10	10	30	10	10	5	75
821 -92	Fencing - Cont. Chap.	Mile	--	--	85	65	100	--	250
94	Fencing - Cont. G.B.&D.	Mile	16	112	150	--	--	24	302
169	Fencing - F.A.	Mile	--	112	--	--	10	--	122
	Subtotal - Fencing	Miles	16	224	235	65	110	24	674
822 -175	Other Protection	Project	--	10	--	--	--	--	10
831 -99	Reservoirs	Each	10	30	12	46	40	40	178
832 -100	Spring Development	Each	33	36	75	77	34	42	297
833 -101	Wells	Each	--	9	--	--	--	23	32
834 -170	Water Catchments	Each	1000	100	50	100	--	2000	3,250
835 -171	Other Water Develop.	Project	40	84	12	28	60	56	280
	Subtotal - Water Develop.	Units	1083	259	149	251	134	2161	4,037
840 -111	Stream - Fish Habitat	Project	30	2	25	12	32	--	101
850 -176	Lake & Res. - Fish Habitat	Project	--	12	50	8	5	6	81
	Subtotal - Fish Habitat	Projects	30	14	75	20	37	6	182

CALIFORNIA MANAGEMENT STUDY

WILDLIFE PROGRAM

B. District Analysis

It should be noted from the various graphs and table that a large part of the wildlife management program in California is in the Section 15 areas. At present, and in the past, under-financing and lack of manpower in the Section 15 districts in range management and S&W, as well as wildlife, has hurt the development of a wildlife program in these districts.

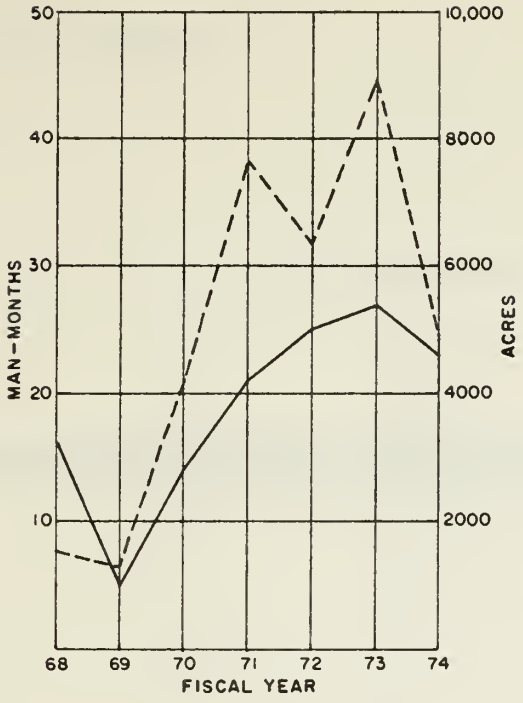
In many areas the important wildlife habitat, with the associated program effort, is in areas where there is no authorized livestock use. It appears that the 1220 funding has been tied to areas of livestock grazing in the past. This has hurt the wildlife management program in California.

It should also be noted that lack of manpower in all districts, as well as lack of sufficient funds in 1220, has prevented any significant growth in the past in the wildlife management part (1220) of the total wildlife program. This is the work that must be done before a sound program of habitat development can be inaugurated.

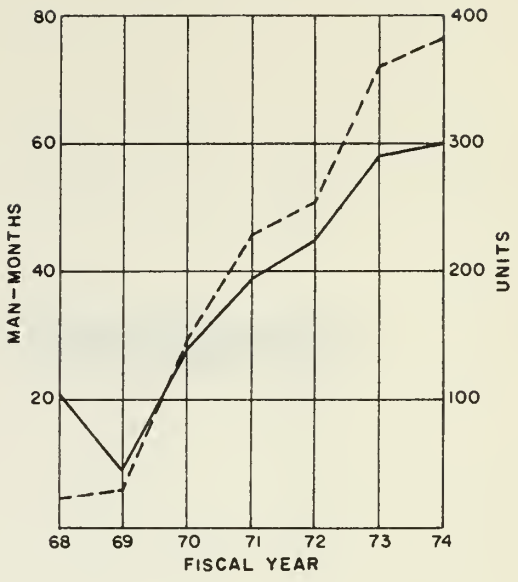
Refer to the "Wildlife Mgt." graphs. As mentioned in Part A, the "Plans" lines are generally too low to accomplish the basic planning, with the possible exception of Susanville. Until many of the basic habitat management plans are developed, there should be at least 6-12 MMs in Job 60 per district. Actual MMs depend on progress in obtaining inventory and study data.

The "Plans" line includes work on access easements and URA. The latter is one of the main causes for the large bulge in FY 70. The Redding District is the only one with a large access workload programmed in wildlife. In comparing districts it should be noted that the "Plans" line for Redding includes 5 MM in FY 70 and 10 MMs in each of FY 71-74 for access.

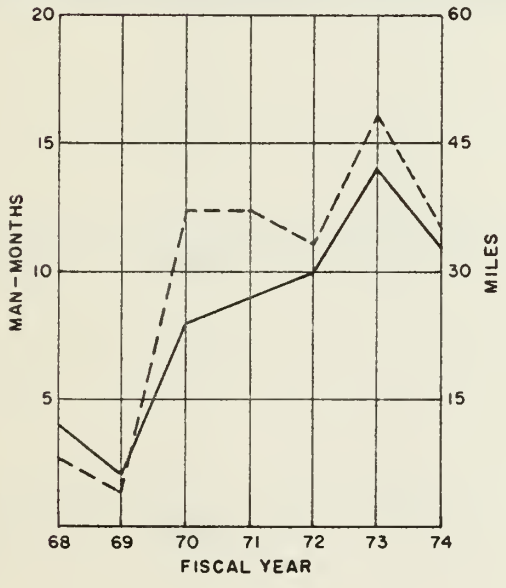
FOOD & COVER DEVELOPMENT
1260-811, 812, 813



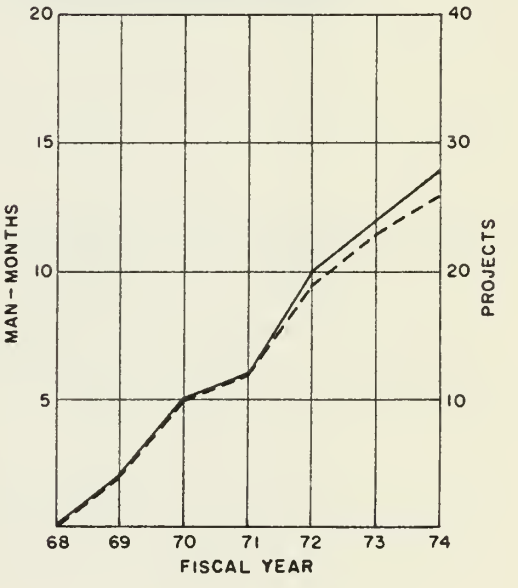
WATER DEVELOPMENTS



FENCING
1260-821



FISH HABITAT
1260-840 & 850

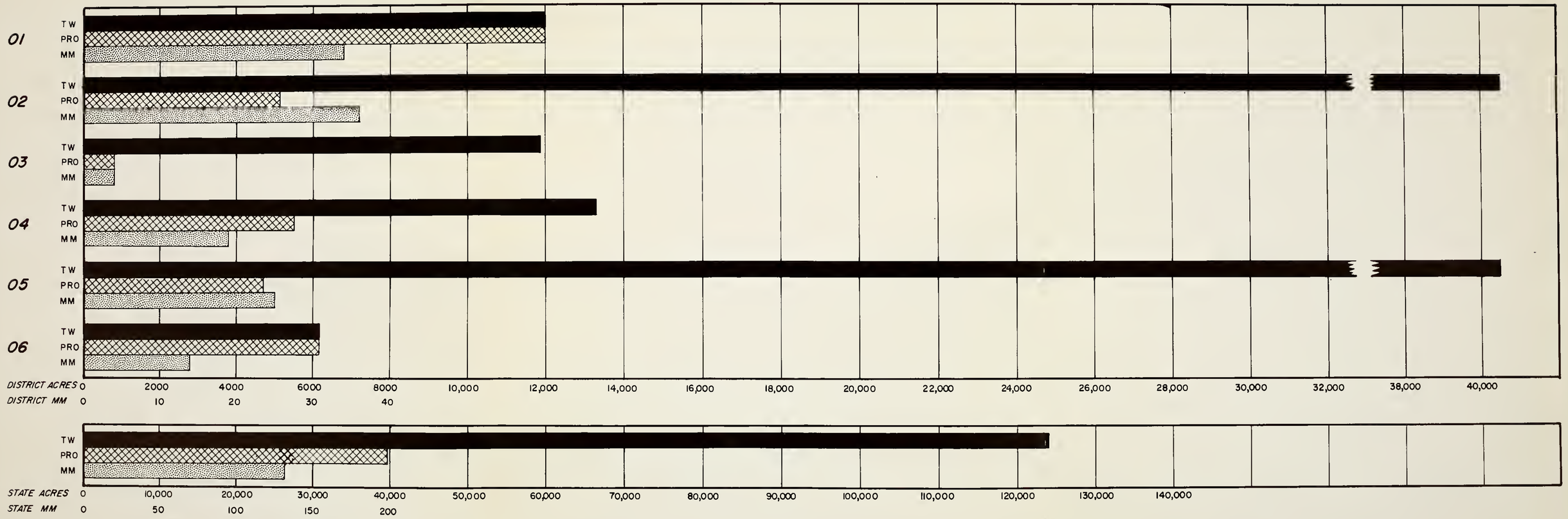


——— MAN-MONTHS
- - - - UNITS

CALIFORNIA MANAGEMENT STUDY
STATE TOTALS
WILDLIFE HABITAT DEVELOPMENT

WILDLIFE HABITAT DEVELOPMENT — FOOD AND COVER DEVELOPMENT 1260-811, 812, 813

TOTAL WORK AND WORK DONE DURING 7 YR. PERIOD FY 68 — 74

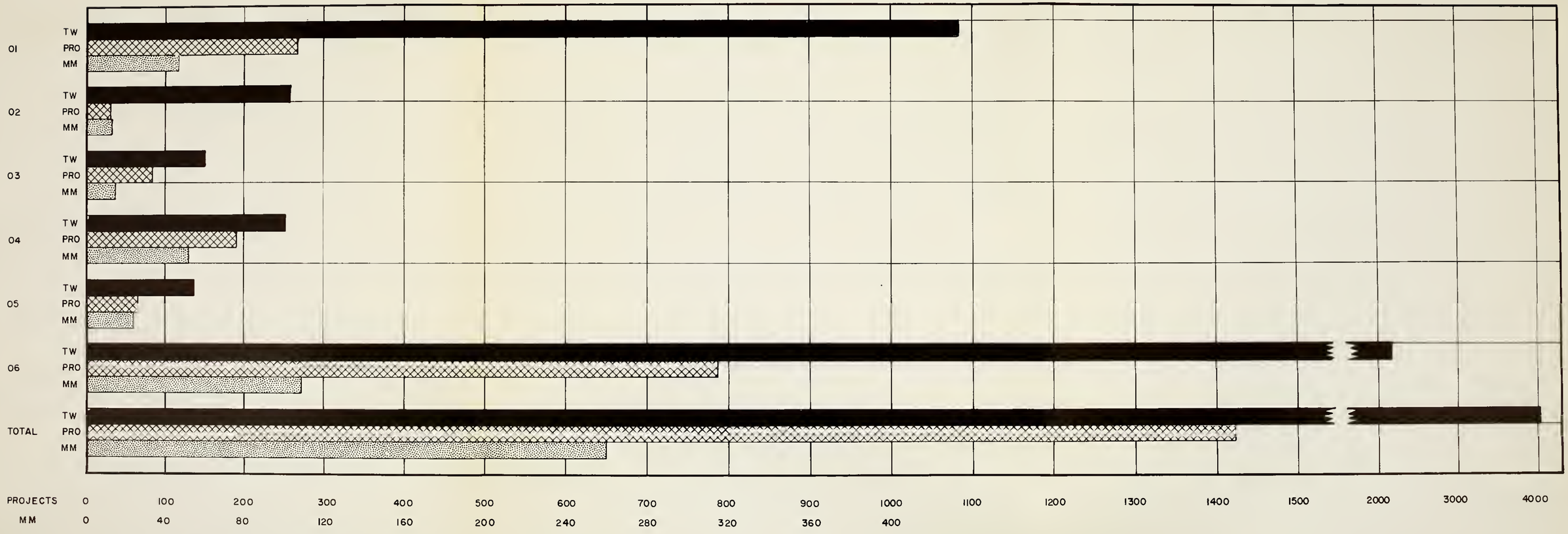


TW – TOTAL WORK
PRO– PROJECT PROGRAMMED
MM – MAN MONTHS

PRO AND MM ARE CUMULATIVE TOTAL FOR SEVEN YEAR PERIOD FY68–74 INCLUSIVE.

WILDLIFE HABITAT DEVELOPMENT — WATER DEVELOPMENT 1260-830

TOTAL WORK AND WORK DONE DURING 7 YR. PERIOD FY68-74*



TW – TOTAL WORK
PRO – PROJECTS PROGRAMMED
MM – MAN MONTHS

* PRO and MM ARE CUMULATIVE TOTAL FOR SEVEN YEAR PERIOD. FY68-74 INCLUSIVE.

CALIFORNIA MANAGEMENT STUDY
1260 ACTIVITY
WILDLIFE MANAGEMENT

Inventories and studies need to be emphasized. Increased effort must be made as soon as possible. In addition to being necessary for habitat plans, these data are also needed for coordination with other activities. For instance, wildlife data are necessary in developing livestock Allotment Management Plans. For this reason, it would be desirable for Susanville, Redding, and Riverside to increase their effort in FY 70.

The same graph shows the efforts in coordination and public relations work. Bakersfield, Folsom, and Riverside will probably have the biggest job among the districts because of people pressure. However, it appears that Folsom in FY 73 & 74, and especially Riverside, are too high in their MM estimate for this work.

Refer to the "Wildlife Management and Development - Total Program" graphs. It appears that Bakersfield and Riverside have jumped the MMs for habitat development too quickly. It is questionable that sound plans can be completed prior to that time. As mentioned in Part A, plans must be developed before a large development program can be properly conducted.

The subtotals on the table showing total wildlife work indicate major differences between the districts. Most of these are habitat development jobs. The largest water development job is in the desert areas of Bakersfield and Riverside Districts. Most of these are water catchments. A large part of the manpower needed for catchments is expected to be furnished by the California Department of Fish and Game through cooperative projects.

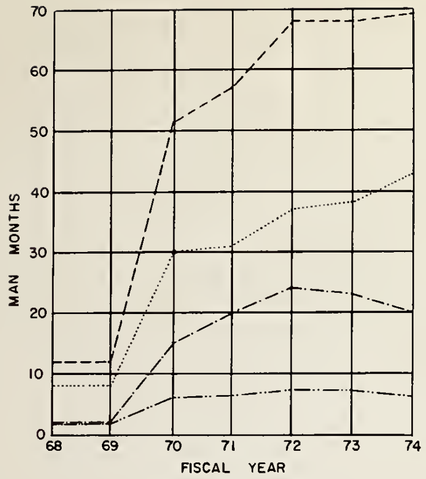
Most of the chaparral manipulation and seeding will be done in the Redding, Folsom, and Ukiah Districts. It seems there may be more seeding acreage, in the future, in the Redding District than is listed. Brush control acreage appears high for the Susanville District, but it may be low for some other districts. Planting acreage may be high in all districts except Redding and Folsom. However, this may be a developing technique that will find wider use.

It should be noted that land treatment projects in areas west of the Sierras are more time consuming and costly than those in the Great Basin area. This is due to both a more fragmented land pattern and the dense chaparral type.

Refer to the Wildlife Management Program Analysis graphs. The reason the Operations line in the Redding District is so much higher than the other districts is because of the deer mitigation project and a large job in access. The access job was mentioned earlier in connection with the "Wildlife Mgt." graph. Mitigation is 4 MMs/year, FY 69-74. The Folsom District also has 6 MMs in FY 74 on mitigation. Deducting these gives a better comparison with the jobs in common with other districts.

Note that these graphs differ for FY 68 with other graphs. CMS printout data were used for FY 68 here. On other tables the actual FY 68 AWP data were used.

A more detailed analysis is necessary in order to develop a total State Wildlife Program. There are a number of adjustments to consider in the individual districts. However, some of these may balance out between districts. Therefore, the State Total, as shown on the "Wildlife Management and Development - Total Program" graph may indicate the approximate state needs.



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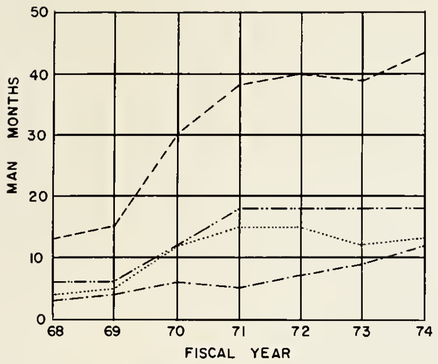

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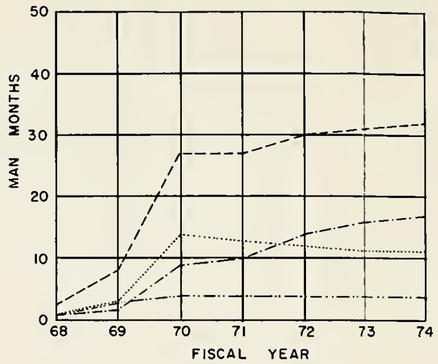

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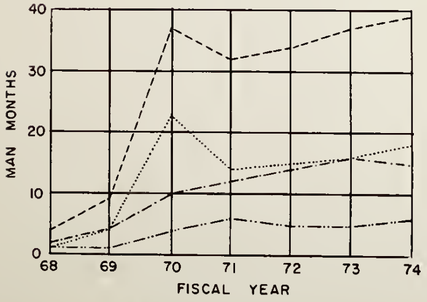

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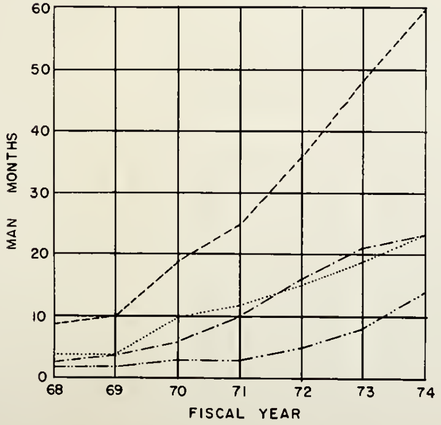

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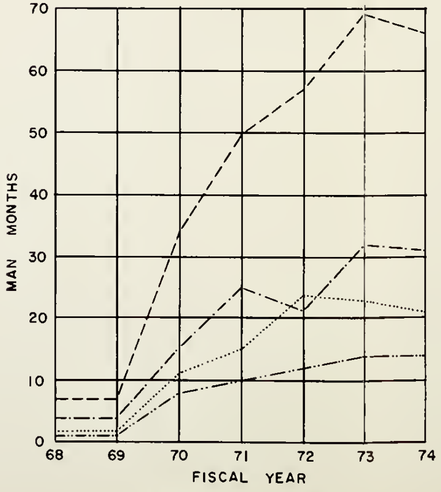
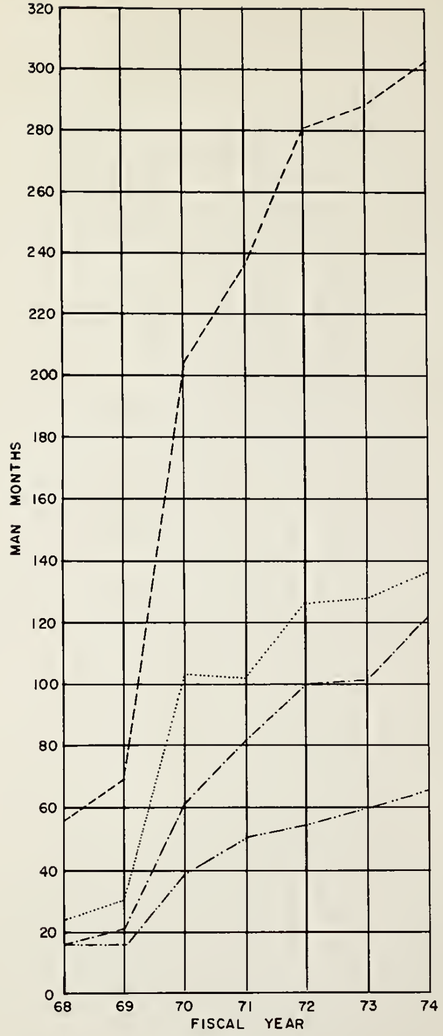


DISTRICT 060

TOTAL
RESOURCE DATA
PROJECT DEVELOPMENT
OPERATIONS



STATE TOTAL

CALIFORNIA MANAGEMENT STUD
PROGRAM ANALYSIS
WILDLIFE MANAGEMENT

CALIFORNIA MANAGEMENT STUDY

FORESTRY PROGRAM

A. General Highlights

1. Total Program Outlook

Progress in the Forestry program in California is currently developed to a relatively low level. Increases in funds and manpower in recent years have been ineffective in raising this level significantly because of intense pressure for manpower to serve other functions. The study clearly demonstrates the inability to show an upswing without significant increases in finances and manpower and without some definite changes in policy and program relationships.

Efforts in Forestry up to this time have been expended rather strictly on the basis of harvesting natural growth with little or no attempt to bring the stands under a regulated pattern of sustained yield management.

The highest annual cut produced to date was 40 million board feet in 1965 whereas the calculated allowable annual cut is 52 million board feet. The requirement for management under sustained yield principles is now a clear mandate of law spelled out in the Classification and Multiple Use Act (78 Stat. 986). These requirements are reiterated to us in the BLM Manual (5000.02, 5700.02 and 2410.12). During the last two years these mandates have been repeated to us in the 1967 and 1968 AWP Directives and the 1968 Program Advices issued at the Washington Level.

The direction in which the Forestry program must aim is crystal clear. The harvest of presently overmature stands must be expedited. Some of these stands are now at the stage of producing negative growth and must be converted to positive young growth. We must plunge rapidly into second growth management. Foresters in the future can no longer consider these stands only as sawlog producers. We will also produce wood fibre, chips, Christmas trees, poles, and many other products as well. Nearly all of our forests are on primary watersheds. Wildlife habitat and recreational aspects are provided in our timber and woodland areas. In

some instances grazing, mining activity, summer homes and other developments are involved. Foresters of the future will manage timber and woodland areas for all of these purposes under multiple use for which plans have not yet been developed. These goals and objectives have generally been recognized but the capability to produce has not yet been granted.

Forestry is a major revenue producer with a high impact on the Gross National Economy showing a ratio of about 26 for every $1 realized in stumpage. Demands for wood fiber will increase and utilization of material currently not being utilized will rapidly come about. California has only recently entered seriously into pulp and paper production with construction of three major plants, and shipment of raw chips from the Port of Sacramento was successfully initiated just this year. As demand and utilization advance, so will price levels, particularly for currently low value species and products.

Expanding the program to the currently calculated potential of 88,000,000 board feet of optimum growth on the BLM commercial forest lands together with management of the watershed, wildlife and recreation values involved is a primary job facing California Foresters. This job will cost us about double current costs but will raise cash revenues to about $2,500,000 annually with an impact of $65,000,000 on the Gross National Economy and provide full time jobs for 8,250 persons. To this must be added the impact of the other benefits.

2. Problems and Variations

Cost-benefit ratios in the Forestry program are most favorable. Total expenditures this year are $605,000 including both Management and Development funds. However, a considerable portion of these funds are currently used for such work elements as combating trespass, unit resource analysis, program services and wildlife plans. Furthermore some $146,000 represents capital investment for future production. Total revenues in cash receipts are expected to be about $1,000,000. The total impact on the G.N.P. is therefore about $26,000,000. These figures do not include other direct benefits, not cash receipts, such as watershed protection and water production, wildlife and recreation. Further

study is needed to develop criteria for assessing the full benefits derived.

Another consideration involves the general trend of the Industry in Northern California. The general consensus of Forest Service, University, and Industry officials, such as the Western Wood Products Association, is that the local mills will be entirely converted to young growth utilization in approximately 25 years. At that time they will be handling smaller logs and wood fiber and no longer geared to handle large old growth logs. All recommendations are against holding overmature old growth timber beyond the 25 year projection.

Directives from higher authority are to eliminate the backlog of PD lands needing rehabilitation treatment by 1975. This objective has been repeatedly expressed in program advices and AWP directives the last several years. There has been considerable set back in achieving a schedule to meet this objective due to low appropriations and subsequent lack of funds to accomplish the necessary work. The BLM Manual spells this out in sections 5000.02L and 5700.02C. The deadline date of 1975 was fixed in the 1967 Program Advice. In the 1968 AWP Directives we were instructed to "delete all site improvement projects having a cost exceeding $50 per acre". These limitations are not realistic when dealing with high sites on primary watersheds and elimination of the backlog is not possible at current levels of operation.

Rehabilitation costs represent the capital investment necessary to recover damage and unproductive lands and guarantee future benefits and production of the total resource potential. These are easily justified by economic considerations but further work and study is needed to develop and present the information. For instance each acre out of timber production represents an annual loss in growth of 250 bd. ft. (statewide average). The stumpage value of this growth based on current prices is $7.50 per acre per year with an impact of $187.50 annually on the National economy. To these benefits must be added watershed values, wildlife values, recreation and any other values derived in other uses.

Under these considerations the $50 per acre limitation on Management is unsound. The Forest Development fund represents the Capital investment necessary now to insure maximum production and watershed protection in the long range outlook.

In timber trespass there is a known backlog of 165 cases awaiting investigation. We must also anticipate the discovery of new cases each year. The Statute of Limitations expires on these cases in 1972. BLM must process these cases to the point of filing court action by then, or lose forever the opportunity to recover damages.

The full potential for California has not yet been determined. We do know certain things from the present inventory of most of the commercial timber stands together with an accumulation of general information about the remaining areas. Inventory and management plans must be completed before we can begin to realize the full potential.

The primary commercial timber stands are in the northern half of the state, concentrated in 3 districts, with about 50% of the volume in Ukiah District. The inventory shows a considerable variation in stand structure between districts. A large surplus of overmature old growth exists in Ukiah District. A surplus also exists on Susanville District, Primarily in Red Fir. Redding and Folsom districts have only limited volumes of overmature timber and will be working almost entirely in young growth within 10 years. Ukiah will be cutting overmature timber stands and regulating area cut for at least 25 years.

The woodland-juniper picture in California is quite different from that of the commercial stands. All districts, including Riverside have sizeable acreages of Hardwoods, marginal conifers and juniper. Susanville district has the largest acreage or about 1/3 of the state total. There are approximately 1,550,000 acres of these types in California.

The Woodlands-Juniper inventory is a preliminary step necessary to bring these uninventoried resources under management and production. We do not now realize their potential. In recent years we have started harvesting a few hundred thousand board feet annually of hardwoods.

Only a few mills handle hardwood sawlogs. Demand for hardwood sawlogs and marginal species for fiber and chips is showing some increase now and the long range outlook shows considerable pressure will ultimately develop for harvest of these products from the public lands.

The economic justification for this inventory is vague at the present time because we have little information on the ultimate production of these lands. The act of Congress dictates the policy to bring them under management. This requirement is set up as BLM Policy in Manual 5000.02C. An inventory is the first step to determine what we have and how it might be managed. The economics of the resource and the impacts of management will follow the inventory together with plans for development and management of the resource.

3. General Conclusions

a. The demand for sawlogs will remain high in the short range outlook.

b. The demand for fiber and chips will increase rapidly and over the long range outlook lead to better utilization of currently merchantable material, and utilization of species and marginal material now considered unmerchantable.

c. Foresters of the future will rapidly change complexion as they are called upon to manage trees and forests for watershed and erosion control values, recreation, wildlife and aesthetic values in addition to wood production.

d. Currently there is a heavy workload wherein we are unable to complete the annual requirements, and backlogs are accumulating in:

(1) Timber Sales, with allied access problems.

(2) Reforestation and Rehabilitation, with allied watershed problems.

(3) Timber Trespass, with allied rehabilitation and management problems.

(4) Woodland Inventory, with allied problems of management and utilization.

CALIFORNIA MANAGEMENT STUDY

FORESTRY PROGRAM

B. Comments on District Submissions:

1. District Details:

The totals of the district programs as submitted are substantially below levels necessary to meet major goals and objectives already established in these elements by the Director. Besides conforming to the dictates of law and good management a very favorable cost-benefit ratio is a primary consideration at the Washington level in judging programs and appropriating funds.

There are several major reasons why districts have not proposed complete management of this resource. A primary reasoning is based on lack of access, road construction, and cadastral surveys to identify boundaries. Before the Forestry Program, as envisioned for California, can be fully implemented considerable increase is necessary in these supporting elements.

The district submissions fall far short of meeting the goals and objectives in timber sales. In fact the district totals are substantially below the current allowable annual cut and do not reach it by 1974, without any consideration whatsoever of the increase necessary to reduce the surplus of overmature timber on inventory now. The graph on timber production and harvest shows this quite clearly.

The total of the district submissions indicates a substantial backlog of lands needing treatment but shows little more than a token effort to substantially reduce the backlog by 1974. Districts show 26,500 acres in the backlog and propose to rehabilitate 5,450 acres by 1974. They further show 22,680 acres in the backlog at the end of 1974. While there is considerable doubt that the districts have estimated accurately, they do agree with our conclusion that the rate of progress is very low, particularly in view of the goal of 1975.

In trespass, the districts show satisfactory progress to eliminate the present backlog of cases by 1972, meeting

the deadline on the statute of limitations, provided we get the increased staffing proposed. There will, however, be an accumulation of new cases in the interim, but we should be on a pipeline basis in Timber Trespass by 1974, and thereafter anticipate a drop in the level of this load as we bring our timber stands under management. If we do not get the proposed staffing the law will effectively eliminate the current backlog of cases over 6 years old in 1972 and thereafter establish for us a six year cycle.

All districts indicate the total job requirements of Inventory. In their programs as submitted, the total job will only be about 80% done at the end of 1974. This leaves them substantially behind the schedule for completion and readiness to initiate a reinventory and recomputation of allowable cuts in 1975. Furthermore this does not provide any time to compute the data gathered during the field work.

2. A State Program:
The forestry portion of the California Management Study needs further consideration and adjustment in three major elements before the State Office can recommend it as a reasonably balanced program. These elements are:

   a. Timber sales to achieve the sustained yield allowable cut.

   b. Forest Rehabilitation to substantially reduce the backlog by 1975.

   c. Woodlands inventory to achieve completion by 1975.

Some details of discussion follow on the three elements cited with comments on the supporting elements involved. Justification principles are included with an indication of the requirements of law and objectives set by higher authority.

   a. Timber Sale Program:
   The Classification and Multiple Use Act (78 Stat 986) specifically includes timber production and dictates management under sustained yield principles. Directives from Washington (Manual 5000.02H) reiterated in program advices and AWP directives in the last two years, have repeatedly stated the objectives of offering the full allowable cut annually, provided markets exist. Currently we have temporary

relief from this requirement based on two problems. One reason involves suspension of management in King Range pending enactment of the Redwood National Park legislation and the second reason involves the lead time necessary to acquire permanent easements for access roads. Favorable markets exist for all the commercial timber we can offer in California.

The current inventory shows 1.3 billion feet of mature and overmature volume on 79,000 acres, primarily in Ukiah District. The growth rate on these stands has reached a low ebb and in some instances is actually negative. Good management dictates that harvest and conversion to young growth stands be expedited under management plans not yet fully developed. Access to much of this timber is lacking and in many cases cadastral surveys are necessary to identify boundaries. Actual construction of main line roads should in most cases precede timber sales. Management plans must consider other resources uses such as watersheds, soil erosion, wildlife, recreation, aesthetics and insure adequate restocking after harvest.

To accomplish these objectives of good management, the development of management plans is a critical need in the immediate future. These first plans need not be detailed but must give adequate consideration to the above requirements. At the present rate of cutting the inventory of overmature timber will not be reduced until 60 years in the future at which time we should have a new crop about two thirds grown. Preliminary estimates are that the current cut should be approximately doubled for a period as long as 25 years, subject to revision at 5 and 10 year intervals. Ukiah district should include plans for King Range in view of a general outlook that the area will not go to the State. The Graph entitled "Timber Production and Harvests" shows this picture and includes the allowable cut in King Range.

To get abreast of the timber sale program statewide, the emphasis on access must be considerably increased so that we have acquired access a full year in advance on all sale areas by 1970 allowing us to offer the full allowable cut by 1971. By 1974 we should have calculated the full regulatory cut on our surplus volumes and start offering increased sales. Also by 1974 we should start offering hardwood sales on a regular basis. Contract preparation and administration must also be increased to take care of the increased number of sale contracts.

b. Forest Rehabilitation:

The districts show a substantial backlog of acres needing treatment for rehabilitation. Presumably most areas needing rehabilitation have been given preliminary surveys in accordance with prior directives and development of consolidated rehabilitation plans is the next vital step prior to treatment. This includes all areas classed as Site IV and above. At the present time the acreage needing treatment is actually increasing due to losses in clearcuts, trespass, fire and storm damage and insect attacks. Good management requires rehabilitation, not only to restore the lost production of timber but to protect and manage the watershed and wildlife habitat values as well. There is a critical need for soils specialists to work on this program both at the district and state levels to determine how to treat the sites and soils involved. Soil type maps are not available in most areas involved.

Although the outlook for funds from the present Congress and administration under the present situation is unfavorable, we must present a program which meets the objectives established by the Director under the requirements of the Act of Congress. We cannot plan specifically when the job is to be done, but we must plan the total job and the requirements in funds and manpower to accomplish it. To meet the

objective currently set by the Director would require a fivefold increase in the present level of this activity.

Efforts must be increased in the use of silvicultural practices which minimize needs for artificial reforestation and use cheaper, quicker methods such as seeding to establish timber stands, particularly after timber harvest and fires.

Although the current goals appear unattainable, a realistic reforestation and rehabilitation program for the state must provide for the following in order of priority:

(1) Assure at least 70% stocking of all timber sale areas within 3 to 5 years.

(2) Progressive rehabilitation of Site IV and above sites currently non-productive but capable of producing commercial timber.

(3) Establishment and maintenance of adequate cover stands on all primary watersheds.

(4) Progressive approach by experience in seeding rather than planting as a cheaper, less disturbing method.

c. Woodlands Inventory

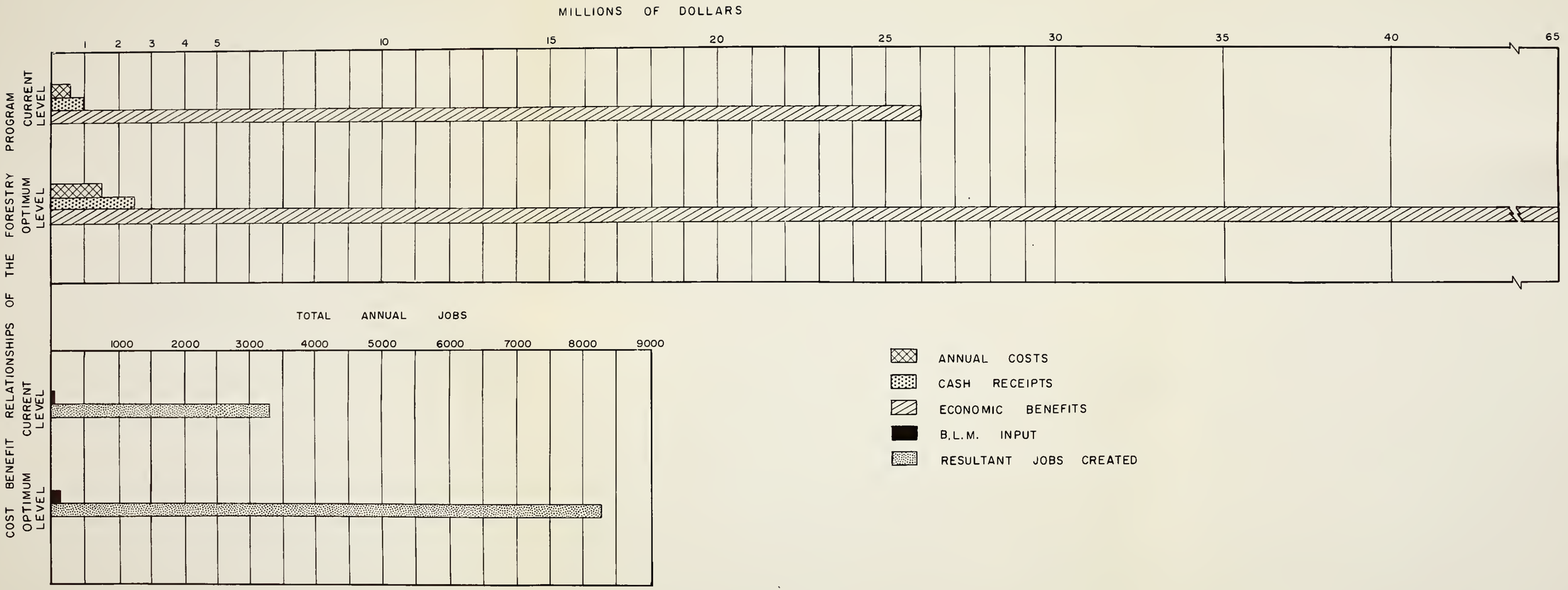
In California, it is conservatively estimated from a preliminary review of type maps, aerial photos, etc. that there is something in the realm of 1.5 million acres of land with hardwoods, Juniper, pinion pine, marginal softwoods and other species of trees growing thereon. The Classification and Multiple Use Act specifically includes these "woodland areas" for multiple use management. We do not have a real estimate of what these land produce in the way of usable resources or products and how they should be managed. Wood fiber and allied products must be considered as well as values for watershed, erosion control, wildlife habitat, recreation and aesthetic values, etc.

Past directives from Washington were to initiate plans for a complete inventory of these lands but the date of starting the project has been set back due to lack of funds and manpower. Programmed in this study was our goal to initiate the inventory after 1970 and complete it in 1974 just prior to the reinventory of the commercial forest lands in 1975. The first ten years period ends then and our schedule must be based on this goal at this time. However, accomplishment of this goal should be placed in a priority below Timber Sales, Trespass, and our basic Reforestation and Rehabilitation requirements.

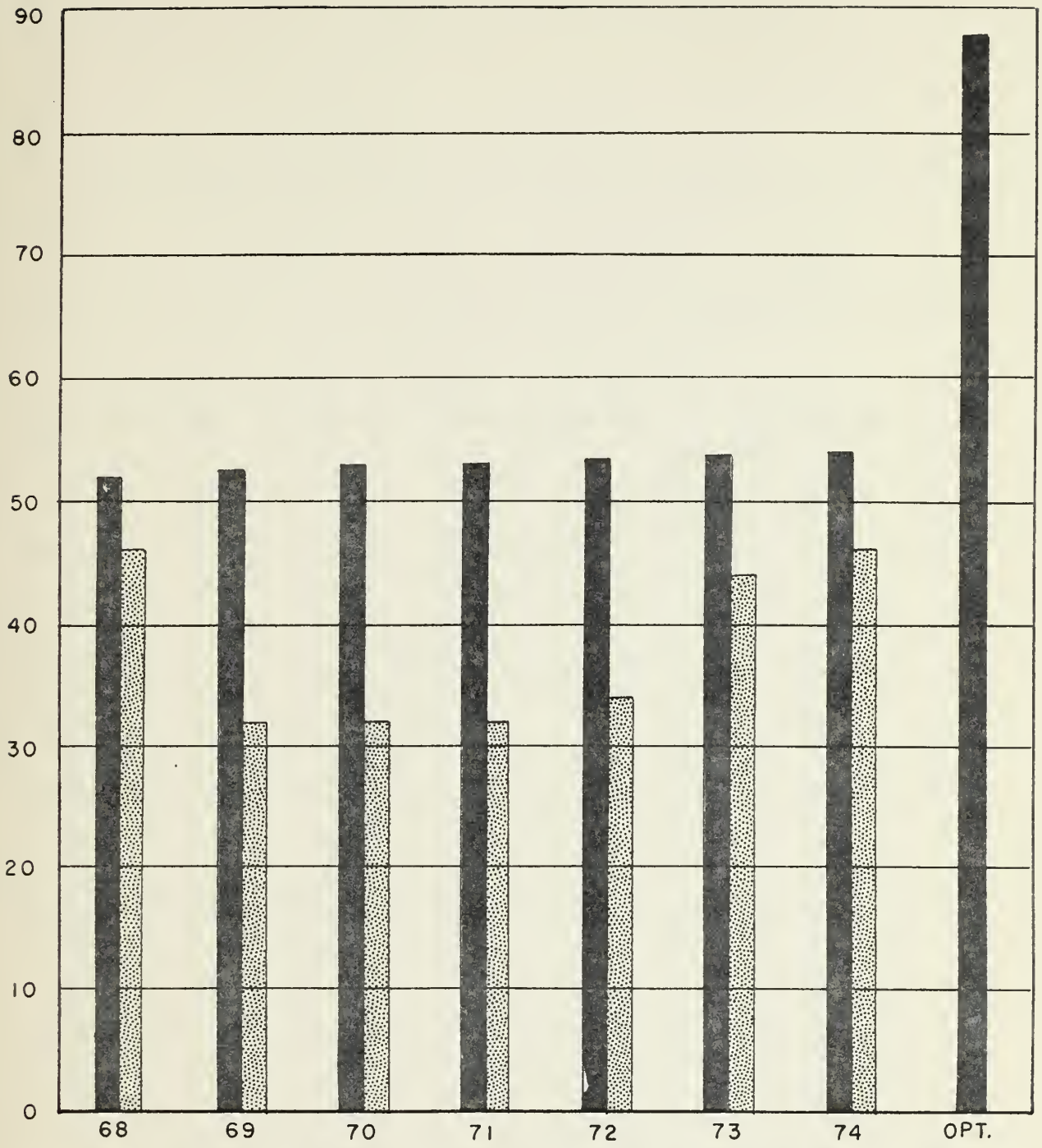
3. Summary and Conclusions:

In summary and conclusion, then, it is evident that the Forestry program submitted thus far by the districts is substantially below levels required to meet Bureau directives and the mandata of the Classification and Multiple Use Act. This fact should be thoroughly considered before submission of our Program to Washington.

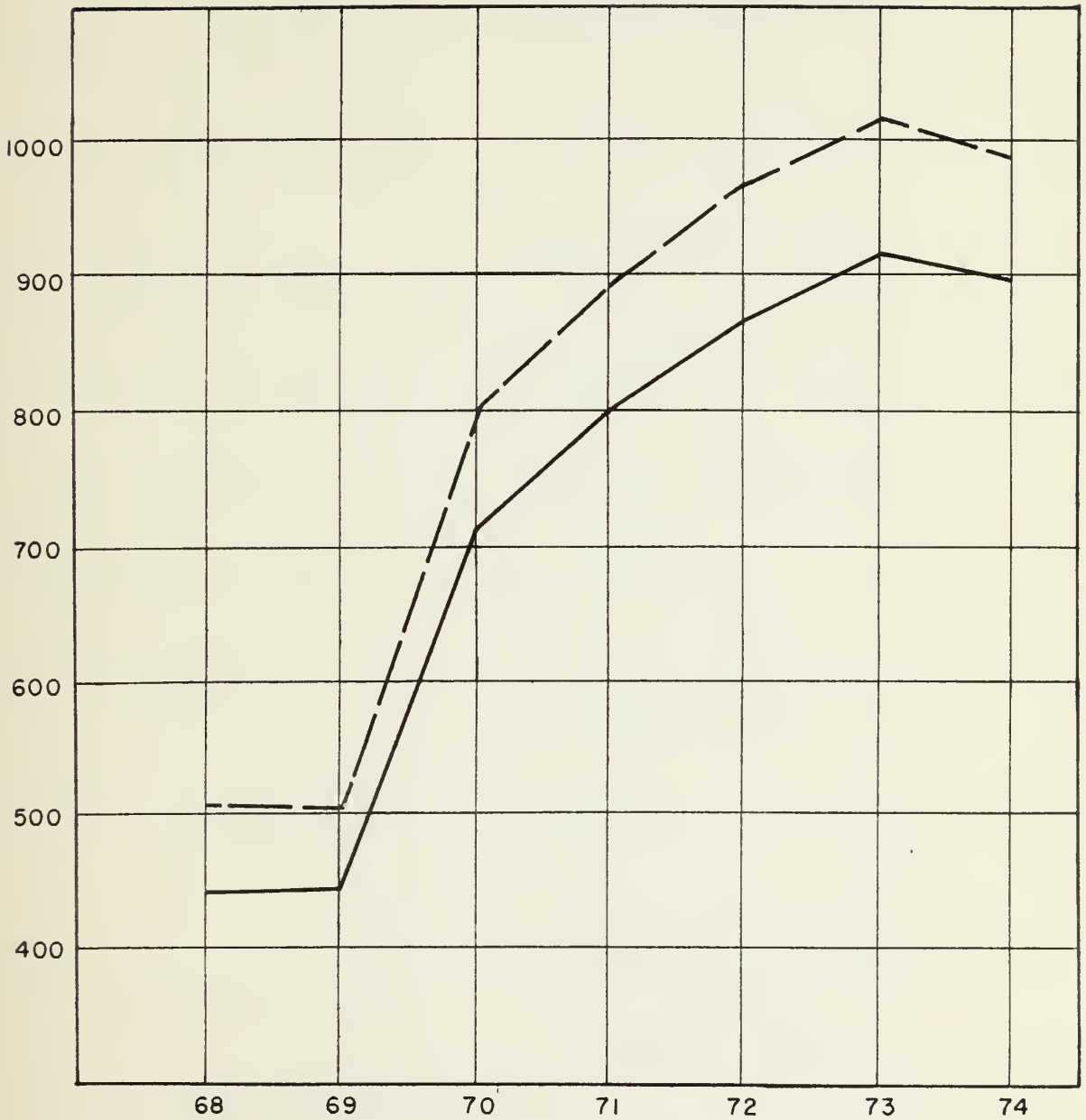
In addition to the need for raising district programs to meet the required objectives the preparation of a state program must also recognize the fact that current staffing in the State Office is not adequate to provide the technical direction, training, operational and budgetary supervision and control necessary to meet these objectives. Furthermore, the addition of new personnel on the districts to meet these goals will add a heavy burden of technical training. It will either be necessary to secure substantial assistance from the Service Center in the technical realms or add staff to cover this. In any event, additional staffing is necessary to cover such a program increase in resource management.



CALIFORNIA MANAGEMENT STUDY
FORESTRY
COSTS BENEFIT RELATIONSHIPS



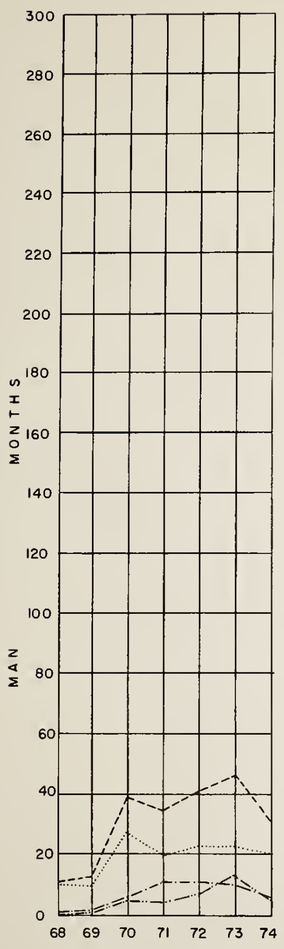
CALIFORNIA MANAGEMENT STUDY
FORESTRY
TIMBER PRODUCTION & HARVEST



——— MAN MONTHS REQUIRED FOR FOREST MANAGEMENT

– – – – ADDITIONAL MAN MONTHS REQUIRED FOR FOREST DEVELOPMENT

CALIFORNIA MANAGEMENT STUDY
FORESTRY
MANPOWER REQUIREMENTS



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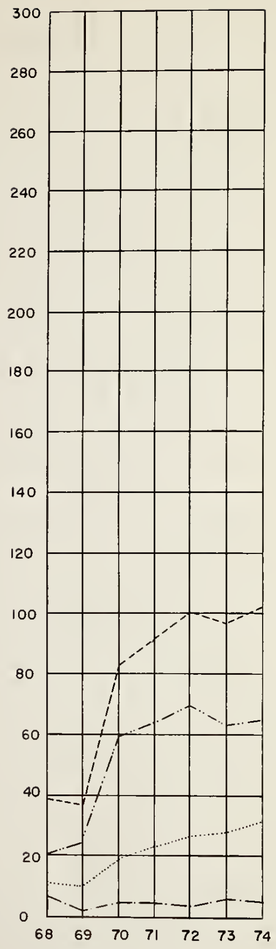

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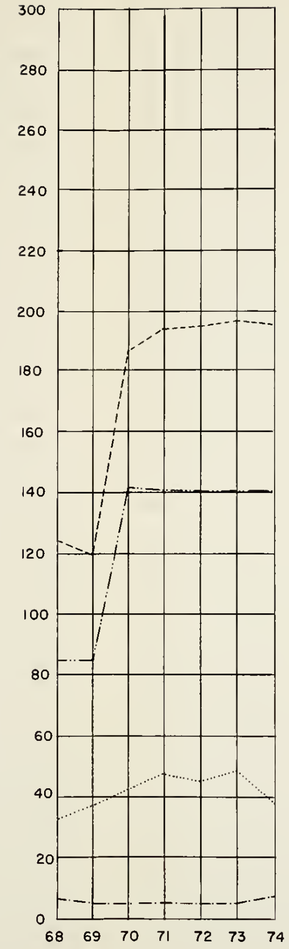

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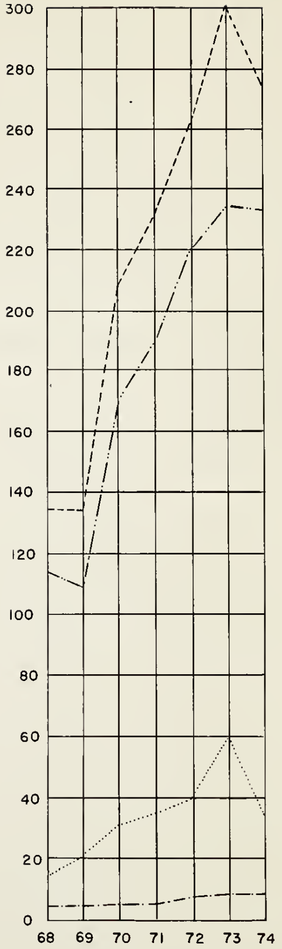

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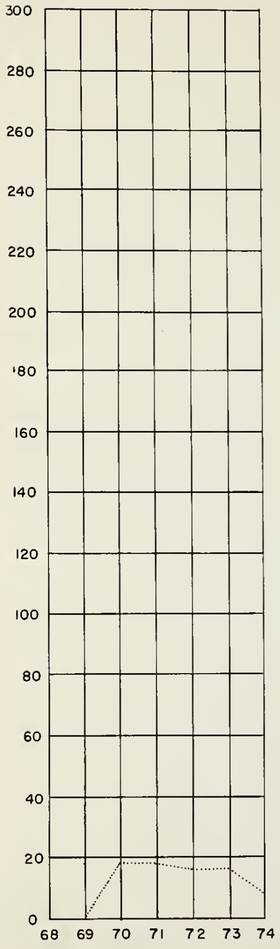

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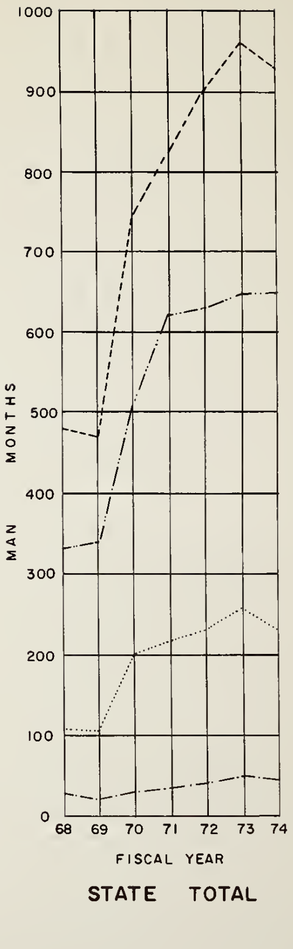

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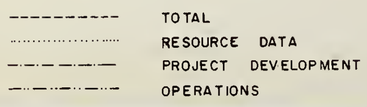
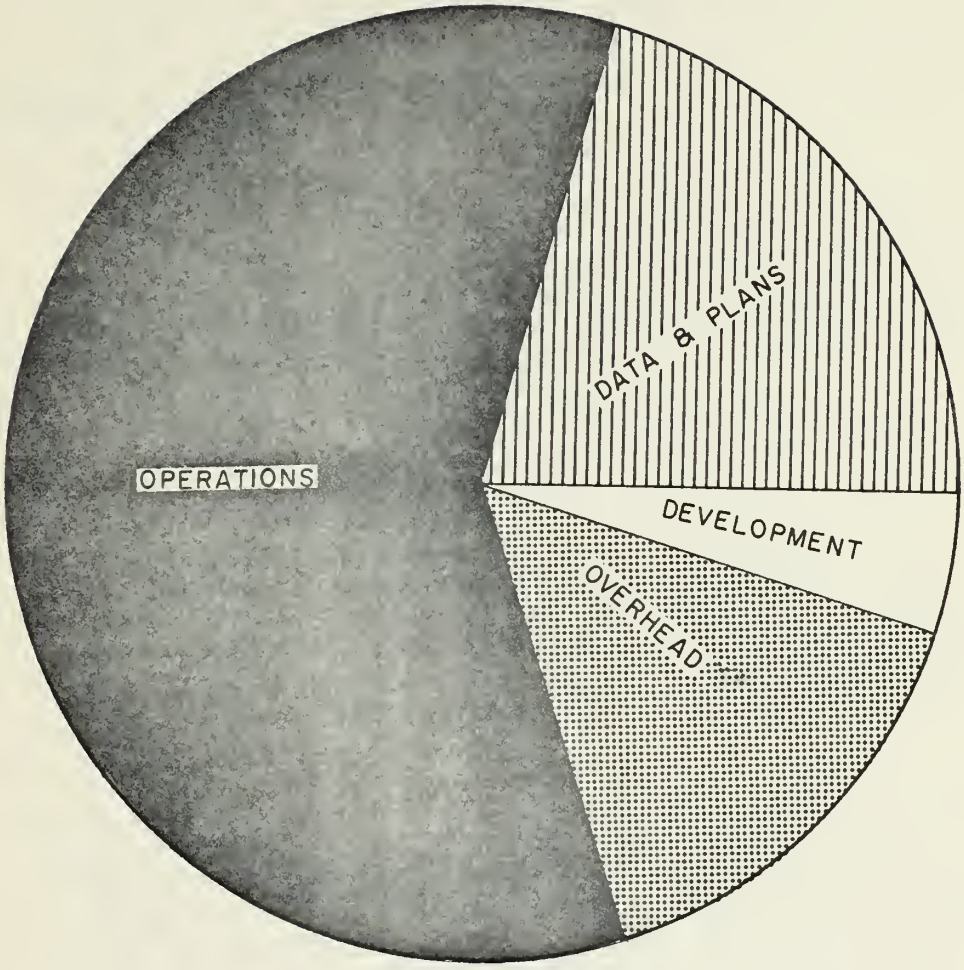


CALIFORNIA MANAGEMENT STUDY
PROGRAM ANALYSIS
FORESTRY MANAGEMENT
& DEVELOPMENT



BREAKDOWN OF AVERAGE PROGRAM COSTS DURING THE PERIOD OF 1970-74

CALIFORNIA MANAGEMENT STUDY
FORESTRY
PROGRAM COSTS

CALIFORNIA MANAGEMENT STUDY

SOIL & WATERSHED PROGRAM

A. General Highlights

1. Total Work

Workloads in man months and units are illustrated by the attached graphs. All job S&W inputs are combined into three categories of work to depict the total program. These are, Data gathering, Operations, and Project development. (see graphs for job grouping)

The program in FY 68 consists of 200 MMs statewide and builds progressively from this to 515 MMs in FY 74, an increase of approximately 150%.

Accumulatively, the program totals 2,428 MMs or approximately 202 man years through FY 74. (see graph) The management study indicates that this man power is required to accomplish the total job load by categories with work identified on the attached proposed accomplishment graph.

2. Special problems

Much of the past work in S&W has been of more direct benefit to the livestock industry rather than to the field of watershed protection. The present program approach in the management study is an attempt to segregate those projects benefitting other activities on public lands and identify only those having true soil and water conservation value. Timing and lack of research data have not allowed us to make the determination realistically in this study. Some jobs (1260 - 88, 89, 93, 94, 92, 169, 99, 100, 101, 102, 107, 108, 109, 110) were entered in the livestock program with the thought that these were more identifiable with livestock than with S&W. A proportionate share of surveys and plans in support of those projects was not removed, which tends to distort both programs. When time permits, a re-evaluation should be made and a more equitable distribution will be made.

BLM lands in the Sierra foothills, the Coast Range and portions of the southern part of the state are in critical watersheds. Water and soil movement in these areas are

influential on cropland, townsites, large reservoirs of the California Water Plan, and fish habitat. Because of records of past damages and current studies of land treatment, benefits of various S&W practices can be reasonably compared with costs and justified. Although BLM land patterns are poorest here, justification for S&W expenditures is strongest.

Contrasted to above in the closed basin and desert portions of the state, benefits for watershed protection are not easily determined due to lack of research projects on sites representative of large areas.

Another problem is that of the BLM not having a prescribed burning program to convert brushlands to a more protective grass cover. This is expected to change as more soil-vegetation data is gathered and as fire is more widely accepted as a conversion tool.

3. Specific directives

   a. Directives in connection with the management study relating to mandatory maintenance of projects are contained in another portion of the study.

   b. Specific W.O. directives for completion of units of work are issued with the annual work plan. The graph illustrates FY 68 commitments and how we have programmed to meet these.

   c. Directives of a more general nature have accompanied past programs. These include:

      1. Increase ensuing year's work by 1/3 over the program year.
      2. Continue surveys of frail lands and treatment of frail lands on a watershed approach basis whereby all work is completed in selected watersheds in a short time period. Manual 7411.7.
      3. Coordinate the 1260 program with directives and deadlines of related activities. i.e. Livestock and wildlife.
      4. Directives in relation to completion of URA is contained in another portion of this study.

4. Conclusions and recommendations

   a. The management study and the discussion above points up a need for more research projects to provide justification for some of our S&W practices.

b. Increasing commitments in the wildlife effort without additions of qualified wildlife specialists are slowing the S&W planning process by a diversion of man months from the S&W program.

c. Soil survey coverage is needed on thousands of acres to more adequately determine advisability and methods of treatment of watersheds.

d. More frequent BLM S&W training sessions are needed to keep field personnel informed on watershed planning and programming procedures.

e. Preparation of a BLM prescribed burning manual is needed.

f. If the program is to accelerate, additional manpower needs are primarily in fields of watershed planning, hydrology, and economic planning. Soil surveys will undoubtedly continue as contract work with SCS for some time into the future.

CALIFORNIA MANAGEMENT STUDY

SOIL AND WATER PROGRAM

B. District Analysis

Time has not permitted an intensive review of district submissions.

The present analysis by graph is on a program basis whereas the submission was on an activity basis. There may or may not have been significant differences had the submissions been on a program basis. Water control practices. for example, may have increased in some districts although the economic feasibility of some of these must first be demonstrated in some areas. A look at the Soil and Water analysis graph of the district raises some questions that may be better answered after a more intensive review of district submissions.

For Example:

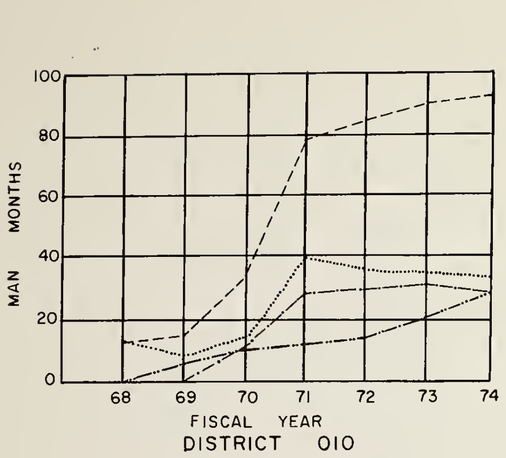
1) Have districts 01 and 06 escalated their manpower in a period of time shorter than can be expected reasonably?

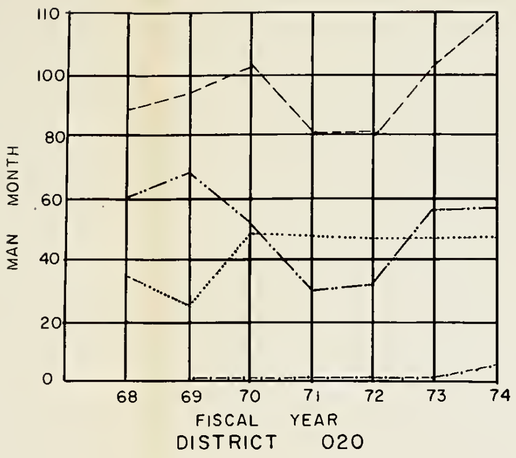
2) Why has resource data gathering declined so drastically in F.Y. 69 to 71 in district 02?

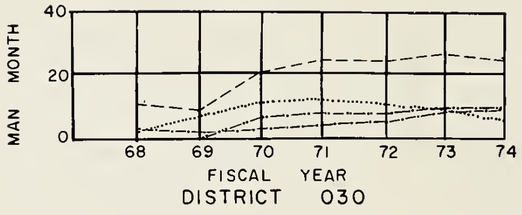
3) Is there reasonable balance between man months devoted to surveys and plans and those to project installation? F.Y. 1968 directives limited man months and dollars in surveys and plans to 35% and 22% respectively.

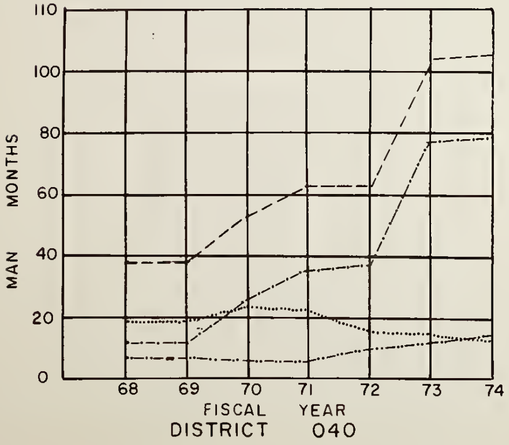
4) Have some districts escalated project development more rapidly than programmed data gathering will allow?

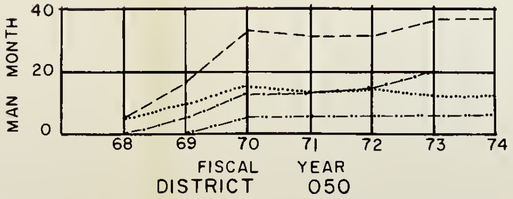
5) Finally, have printouts been checked with original district submissions for errors in transferring data?

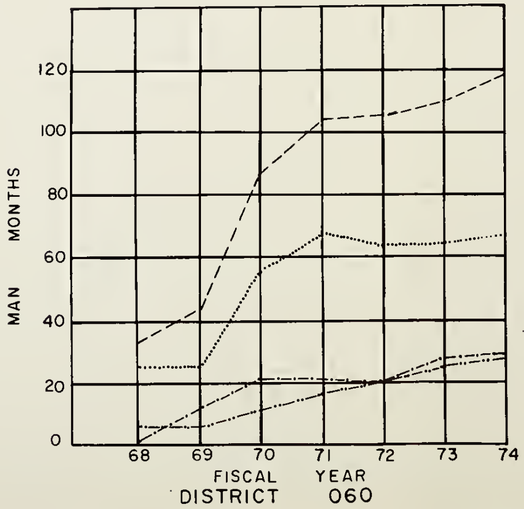


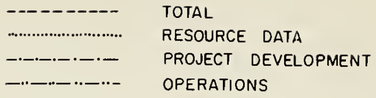


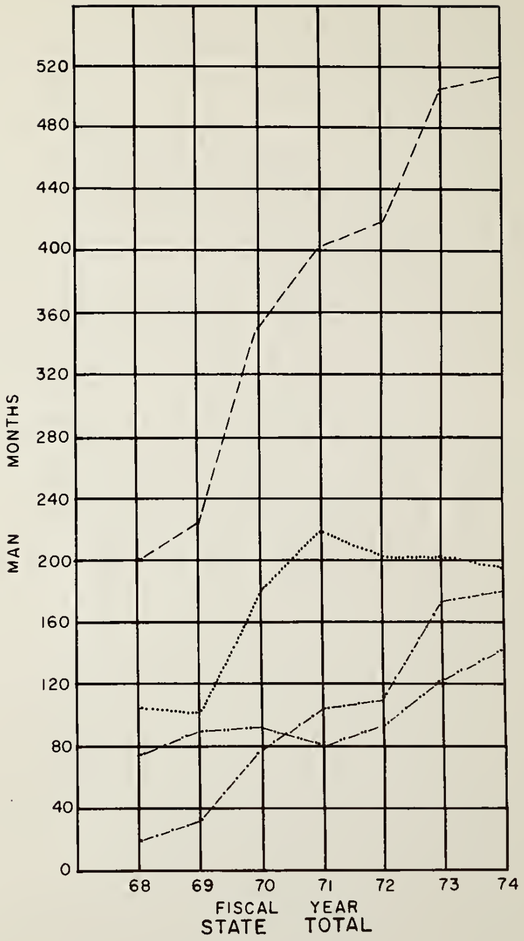










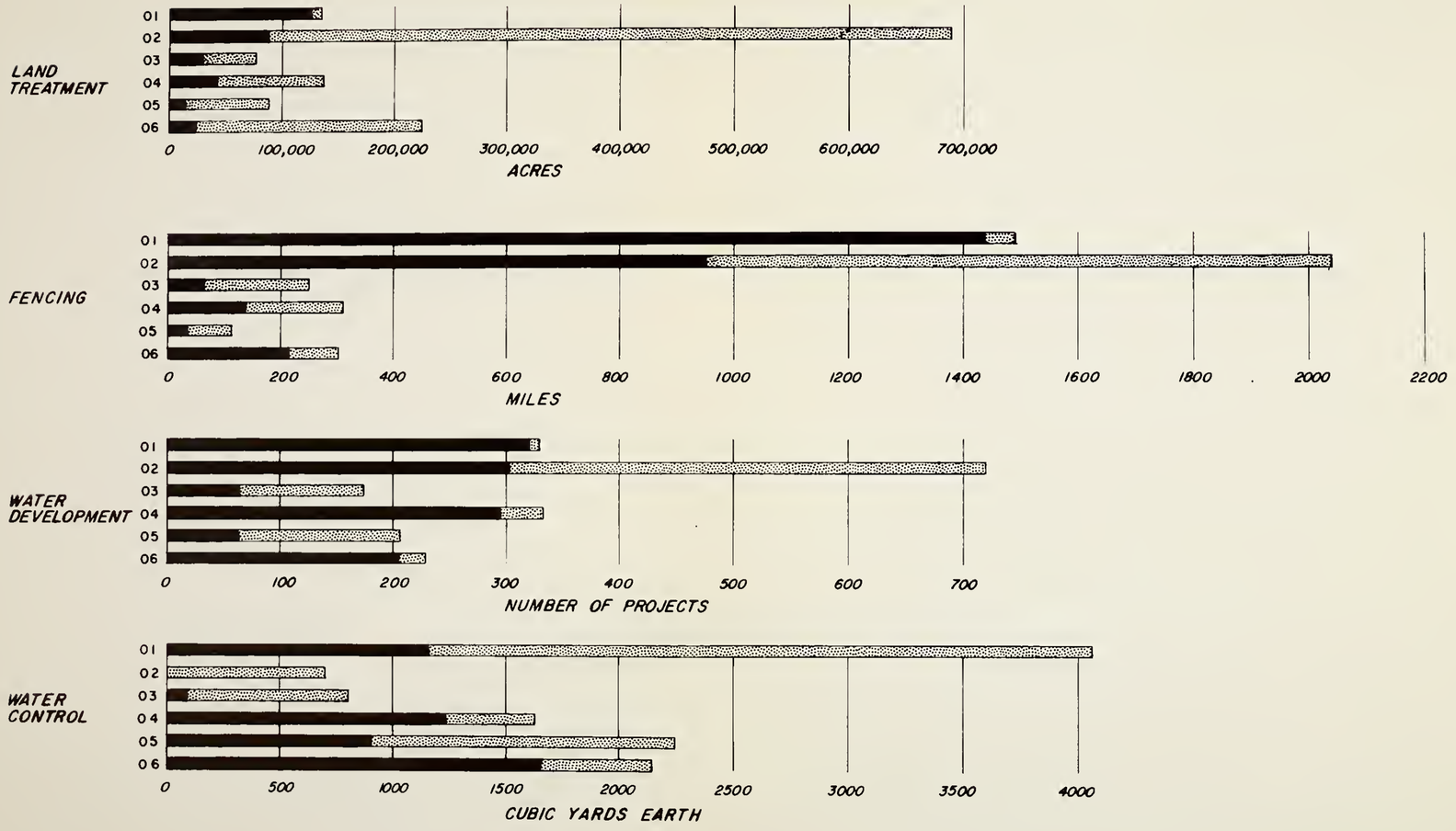


CALIFORNIA MANAGEMENT STUDY
PROGRAM ANALYSIS
SOIL & WATERSHED

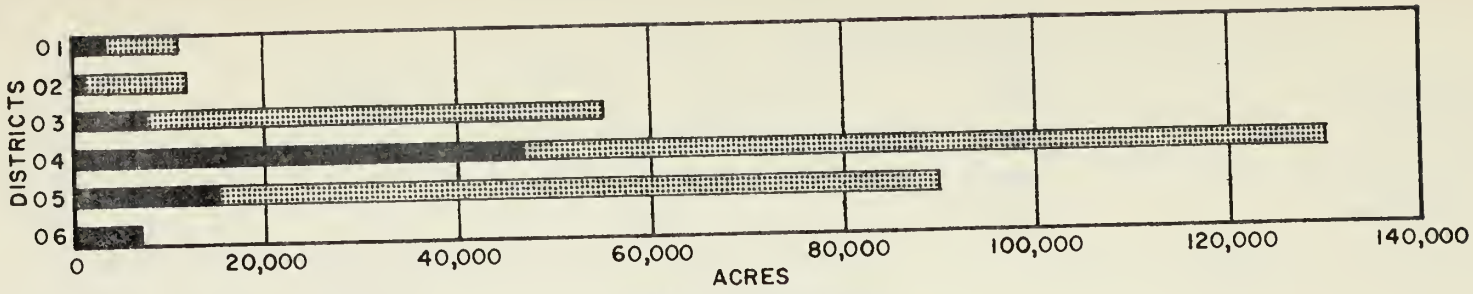
TOTAL 1260 ACTIVITY

TOTAL WORK LOAD IN MAJOR CATEGORIES BY DISTRICT AND PROPOSED ACCOMPLISHMENT BY 1974

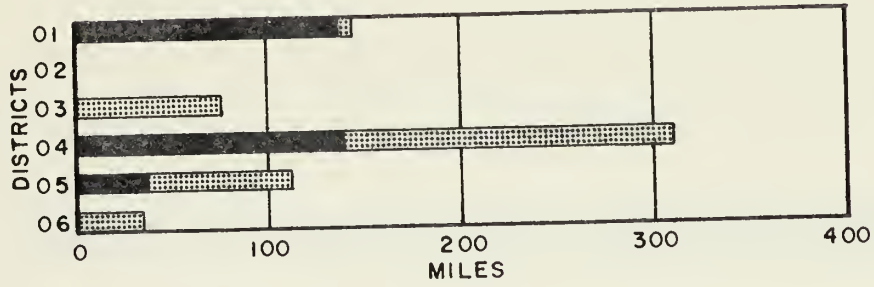
LEGEND



CALIFORNIA MANAGEMENT STUDY
1260 ACTIVITY
WORK LOADS



LAND TREATMENT

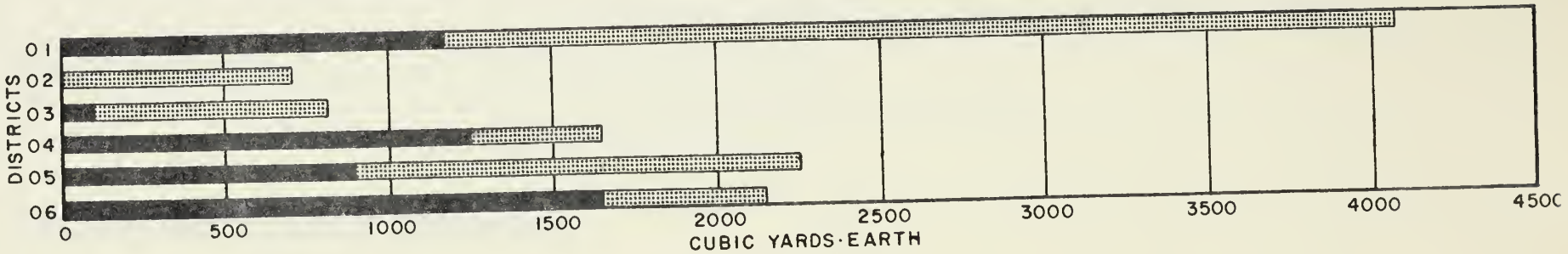


FENCING

LEGEND

Total Work Load in Major Work by District

Proposed Accomplishment by 1974



WATER CONTROL

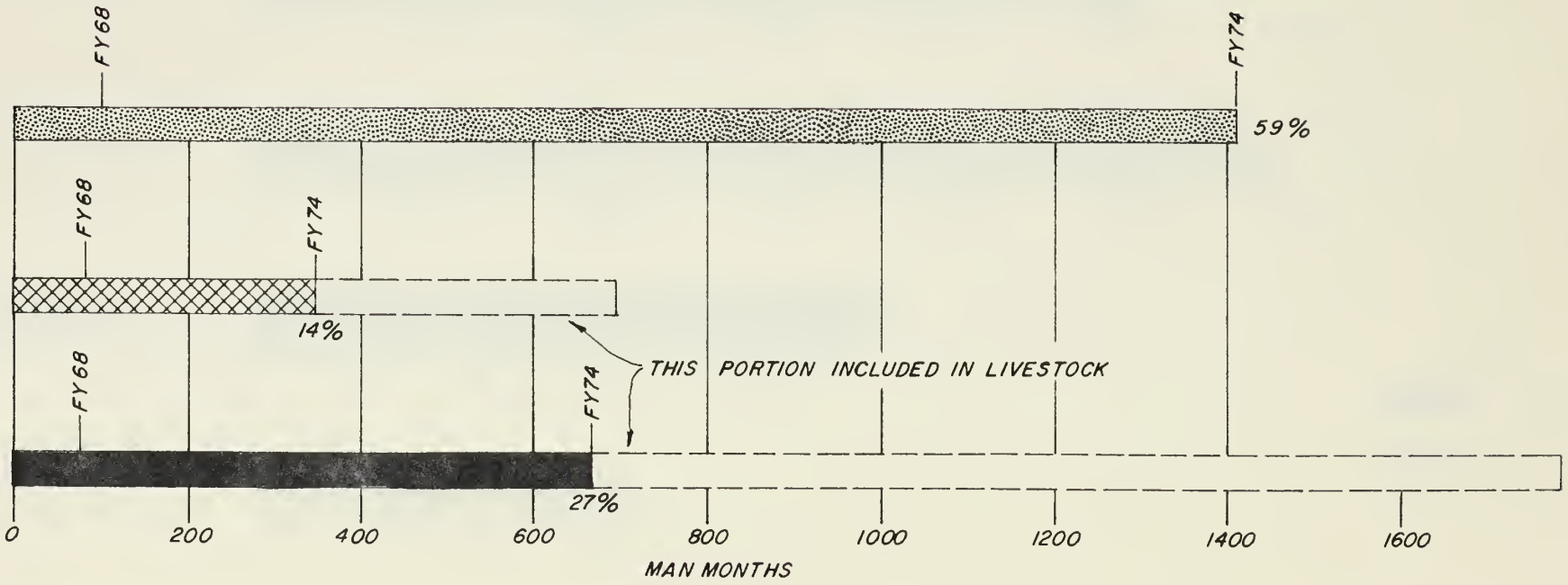
S and W PROGRAM

TOTAL WORK LOAD PROGRAMMED THRU FY 74
(MAN MONTHS)

DATA	
Technical Training	151 MM
Co-operative Research	39 MM
Surveys, Plans, URA, Public Relations	1150 MM
Cartographic Input	76 MM
	1416 MM

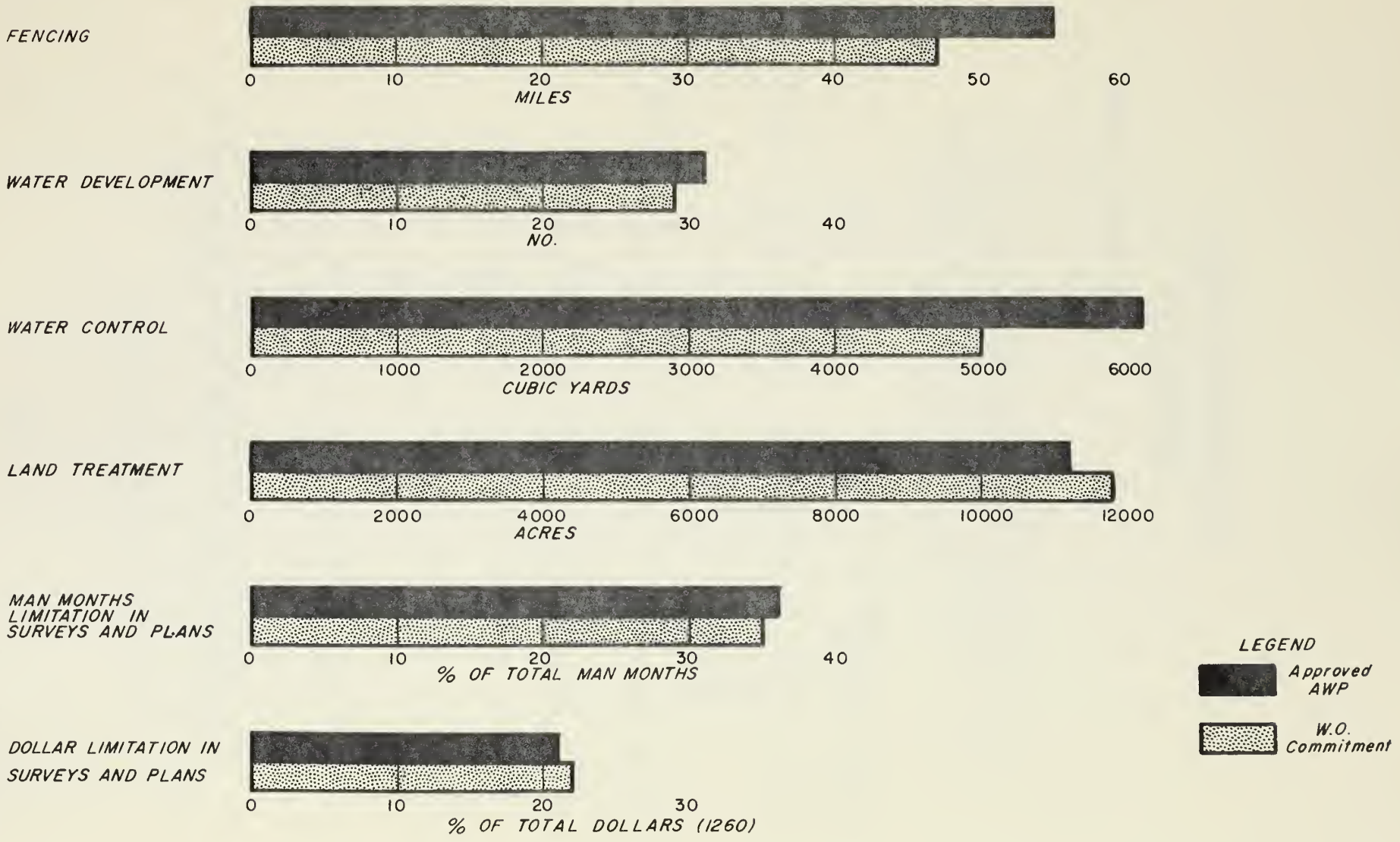
OPERATIONS	
Easement Acquisition	38 MM
Project Maintenance	316 MM
	354 MM

PROGRAM DEVELOPMENT	
Land Treatment	290 MM
Fencing	76 MM
Water Control	292 MM
	658 MM



CALIFORNIA MANAGEMENT STUDY
S AND W PROGRAM
WORK LOAD

FY-68 AWP COMMITMENTS AND PROPOSED GOALS (1260)



CALIFORNIA MANAGEMENT STUDY

FIRE PROTECTION

A. General Highlights

1. Workload totals.

District and State Office man month workload totals are summarized by Program Analysis, Work Category, and Prevention-Presuppression graphs. Man month totals for FY 68 and 74 by district are aligned with fire protection acres in the following table:

District	FY 68 MM	FY 74 MM	Fire Protection - Acres Total	Contract	Force Acct.
Bakersfield	20 1/	75 2/	3,427,908	510,723	600,000
Susanville	75 1/	297 2/	3,020,394 3/	16,419	2,653,815
Redding	6	12	336,190	311,415	
Folsom	8	22	616,729	520,825	
Ukiah	8	22	469,474	420,762	
Riverside	2	30	9,111,720	270,147	
State Office	7	24	--	--	
Total	126	482	16,982,415	2,050,291	3,253,815

1/Includes about 25% of temporary fire crew time. About 75% crew time funded by 1510 presuppression and Suppression.

2/Includes basic fire personnel during the entire normal district fire season.

3/Includes 1,712,000 acres in Nevada protected by Susanville.

2. Special problems.

Through a discussion of Fire Protection Directives and Advices our special problems are narrowed down to funding and equipment.

The F.Y. 1969 Program Advices, F.Y. 1968 Annual Work Plan Directives and Program Outlook Guide for F.Y. 1969-1973 generally direct fire protection to provide for:

a. Protect unique natural and historical resources from wildfire.

b. Increase emphasis in protection of the most valuable land areas.

c. Add protection emphasis to compensate for identified increases in hazards and risks.

d. Provide for mobility and increased efficiency of available fire fighting resources.

e. Continue orderly replacement of specialized fire equipment at accelerated rate.

f. Modernize communication system.

g. Continue fire prevention program.

h. Continue specialized fire training.

i. Meet contractual obligations.

They specifically stress priority to these tasks:

a. Complete first generation fire control plans within established deadlines. This task is to be complete, Bureau-wide by the end of F.Y. 69. Established deadlines for California -- Susanville District by December 1, 1967; other California districts by end of F.Y. 69.

b. Emphasize prevention and presuppression activities where resource values, hazards and risks are the greatest using fire control plan data as soon as possible.

We can complete district fire control plans within the deadline set with staff and MMs on hand. The Susanville District's fire control plan has been completed and will be submitted to the State Office in December 1967. The other California districts will have their plans partially complete through the adjusted initial attack phase by July 1968 and will be completed during F.Y. 69 if programmed funds and MMs for F.Y. 69 fire planning are provided.

District fire prevention efforts may be less than adequate but cannot be analyzed without the benefit of completed fire planning study.

It appears that districts will meet Bureau long range programs and oojectives although Redding District is probably too conservative.

Special problems are in funding and equipment.

a. Funding

At the present time fire crews are funded under two accounts, 1510 and 1270. For greater efficiency, fire crews should be funded under Account 1270, Protection, during the normal fire season.

Efficiency gains:

1) Early hiring and training of temporary fire crews.

2) Key fire personnel such as station foremen, fire truck drivers and dispatchers made permanent. A greater training investment can be made on permanent personnel. Also, the difficulty of hiring from season to season qualified key fire personnel would be eliminated.

3) Funding can be planned based on the total job.

b. Equipment.

Equipment such as radios and pumper trucks are vital components in fire protection and must be replaced timely. This hasn't been done in the past. Increases in man months assumes accompanying efficient equipment.

3. Conclusions and Recommendations

a. Conclusions

1. Districts F.Y. 68 and 69 programs are on a bare bones manning. Force account presuppression and fire planning needs are provided to meet mandatory requirements. Prevention (education, fire. trespass, hazard reduction, fuel break construction)

is below the mandatory level. Contract supervision is also below the mandatory level of operations in light of directives and advices.

2. Districts have programmed F.Y. 70 - 74 a satisfactory level to meet Bureau protection objectives barring no change in contractual obligations. Redding district is conservative.

b. Recommendations

No change is recommended until completed district fire planning studies are analyzed. We are status quo.

CALIFORNIA MANAGEMENT STUDY

FIRE PROTECTION

B. Comments on District Submissions.

Man months available F.Y. 68 and 69 are barely enough to complete mandatory jobs. By F.Y. 74 the basically contract districts have moved from a bare bones program to one allowing adequate fire prevention work and contract supervision. Also key permanent personnel with fire fighting background are receiving overhead fire training to support force account protection, to better analyze district fire problems, and to support resource management in brush conversion and other projects. Fire trespass should be worked on a pipe line basis. The program shown for F.Y. 68-74 assumes no change in present contractual obligations.

Excluding Susanville District, districts have programmed without the benefit of a completed fire planning study. In all districts emphasis has been placed on the completion of the fire planning study by the end of F.Y. 69. The Susanville District fire planning study is complete.

District and State Office workload differences are shown by Program Analysis, Work Category, and Prevention-Presuppression graphs which are explained below.

The scattered BLM lands west of the Sierra and in the western portion of Southern California are largely protected from fire by contracts with the California Division of Forestry and the U.S. Forest Service. These agencies have policies of vigorous and immediate control action.

Presently, organized BLM force-account fire protection is limited to the Susanville District and the portion of the Bakersfield District east of the Sierras.

The high-desert country in the eastern portion of the Riverside District has a rare fire occurrence. Until the fire planning study reveals the protection system needed, action on fires in this area will consist of either bringing in out-of-district BLM force account crews or requesting suppression assistance from a cooperator with subsequent reimbursement. Here, fire prevention, detection and initial attack reconnaissance are the principal district protection jobs.

District manning is dependant on the type of protection. Force account districts are heavy in fire crew man months. Thus, the operations curve on the Program Analysis graph is significantly higher in Susanville and Bakersfield Districts.

The tremendous Program Analysis graph difference in Susanville and Bakersfield District operations from F.Y. 69 to F.Y. 70 is misleading. Temporary fire personnel in F.Y. 74 are not significantly greater than present crews funded--about 25% out of activity 1270 during Fire Condition Class I, II and III and about 75% out of Account 1510 during Fire Condition Class IV and V. The operations management level on the Susanville and Bakersfield graphs for F.Y. 68 - 69 equals about 25% of actual man months. Force account basic fire crews are funded out of Activity 1270 for the entire normal district fire season F.Y. 70 - 74. The Prevention - Presuppression graph shows district man month variation in Activity 1270 prevention-presuppression and Activity 1510 presuppression during FY 68 - 74. Also shown on this graph is the expected normal Activity 1290 suppression man months.

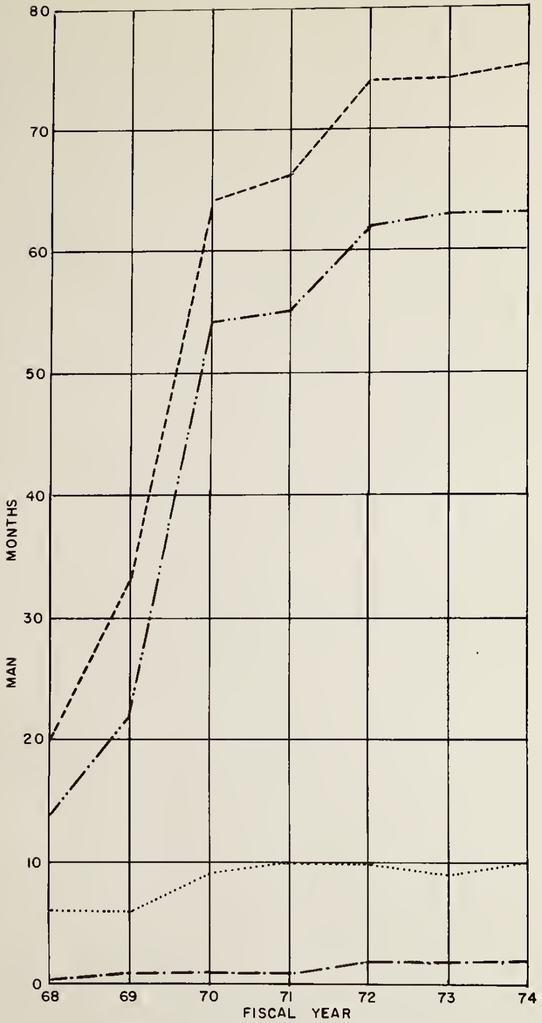
Man months shown for Susanville District FY 70 - 74 represent the fire protection need as determined by the District's completed fire planning study.

Resource data on all Program Analysis graphs is basically fire planning. As the fire planning study is completed during F.Y. 69, planning becomes one of updating and revision with resource management changes.

Project development consists of hazard reduction and fuel break construction. A very limited amount has been shown by each district. Completed district fire plans should provide the necessary data to develop a California hazard reduction-fuel break construction program.

California District Acreages by Type of Protection are as follows:

District	Total Acres	Calif. Div. Forestry Contract		U.S.F.S. Contract	Force Acct.	Reimbursable	No Formalized Protection
		Zone I	Zone II				
Bakersfield	3,427,908	187,697	323,026		600,000	667,000	1,650,185
Susanville(Calif)	1,308,394			16,419	941,815	350,160	
Susanville(Nev.)	1,712,000				1,712,000		
Redding	336,190	225,917	39,922	45,576			24,775
Folsom	616,729	340,270	175,681	4,874			95,904
Ukiah	469,474	407,303	13,176	283			48,712
Riverside	9,111,720	139,141	131,006				8,841,573
TOTAL	16,982,415	1,300,328	682,811	67,152	3,253,815	1,017,160	10,661,149



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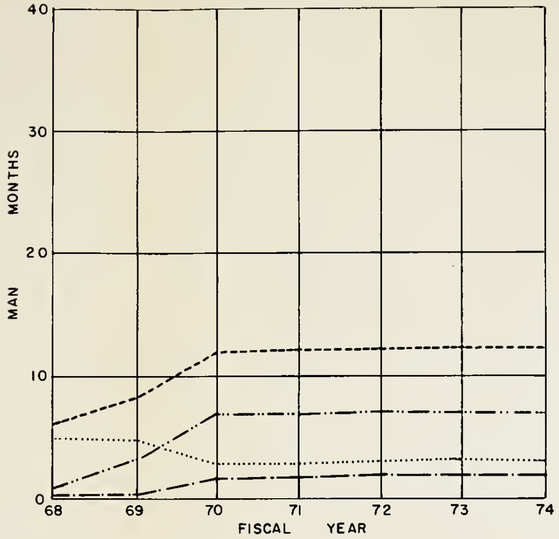

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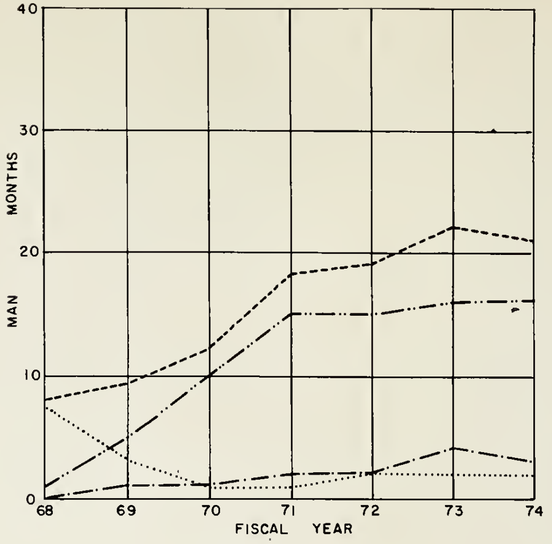

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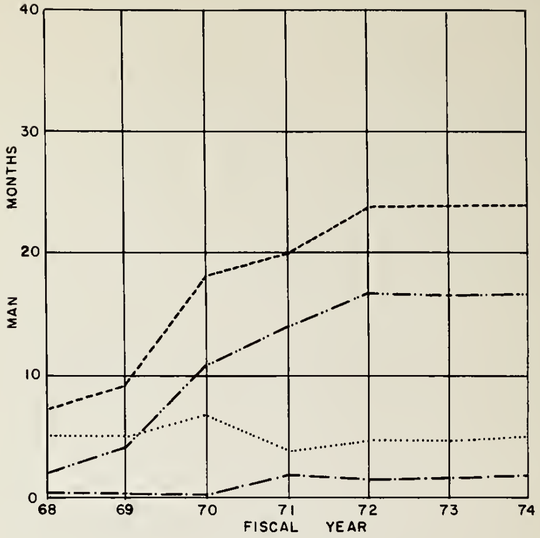

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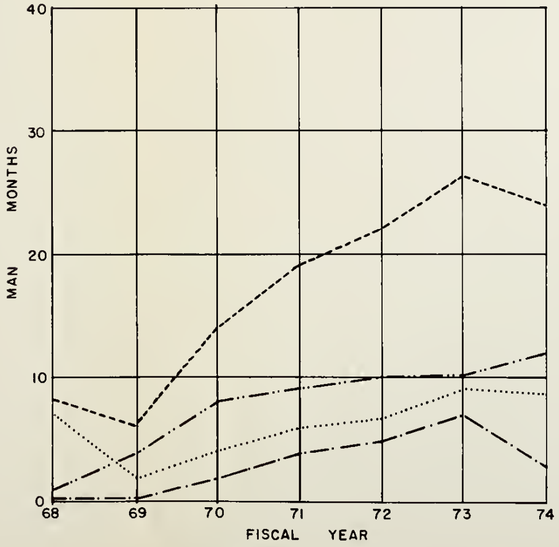

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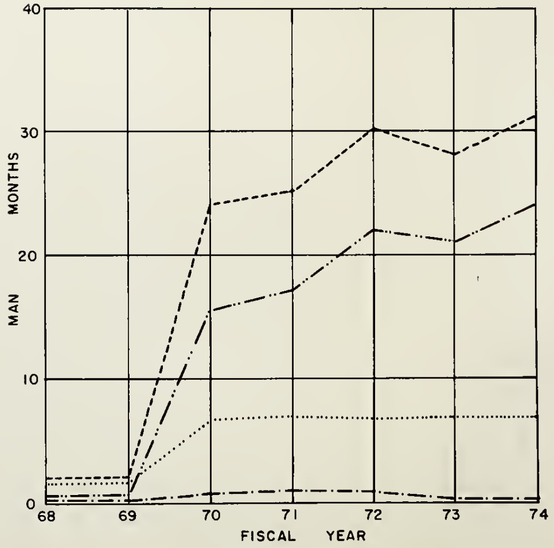

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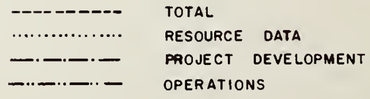
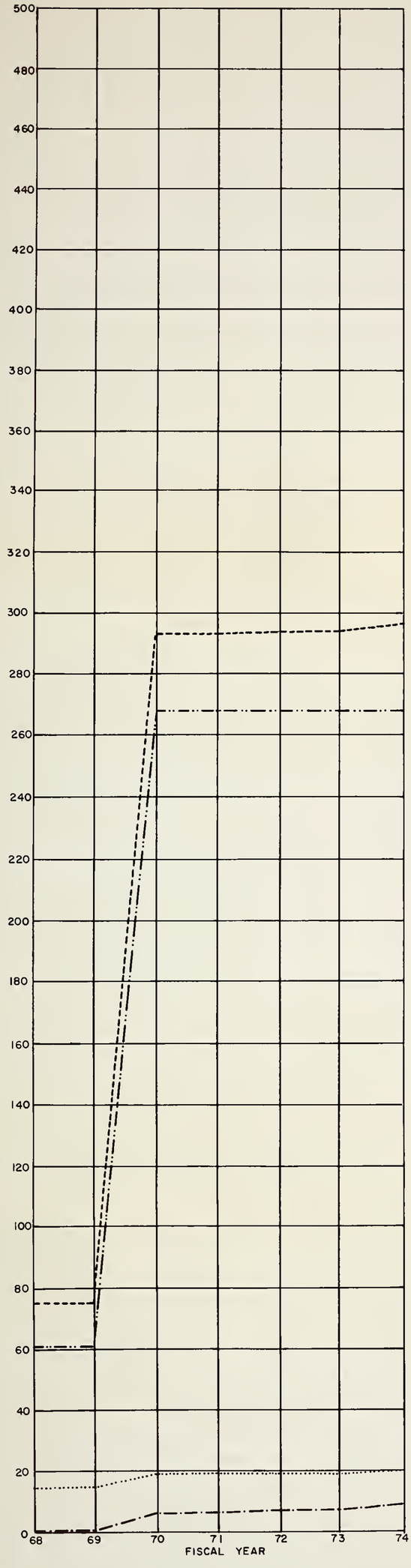


CALIFORNIA MANAGEMENT STUDY
PROGRAM ANALYSIS
PROTECTION
SHEET 1 OF 2



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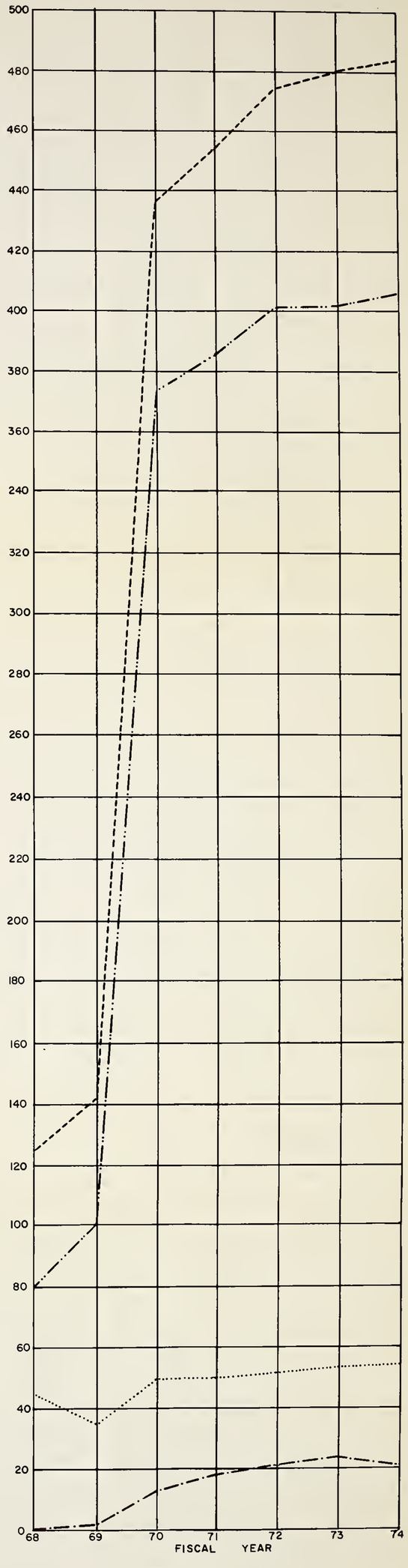
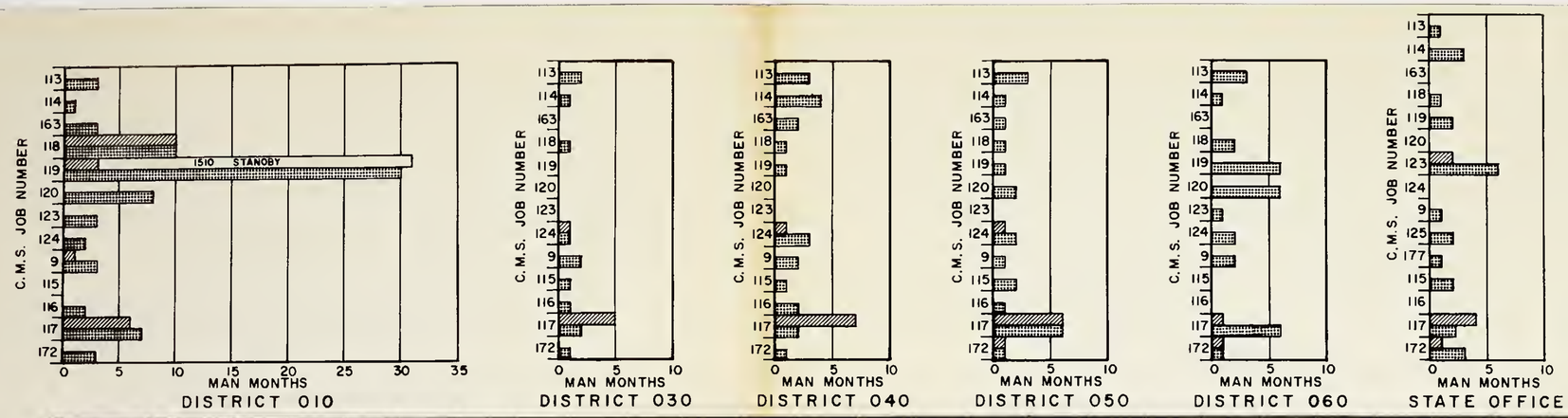
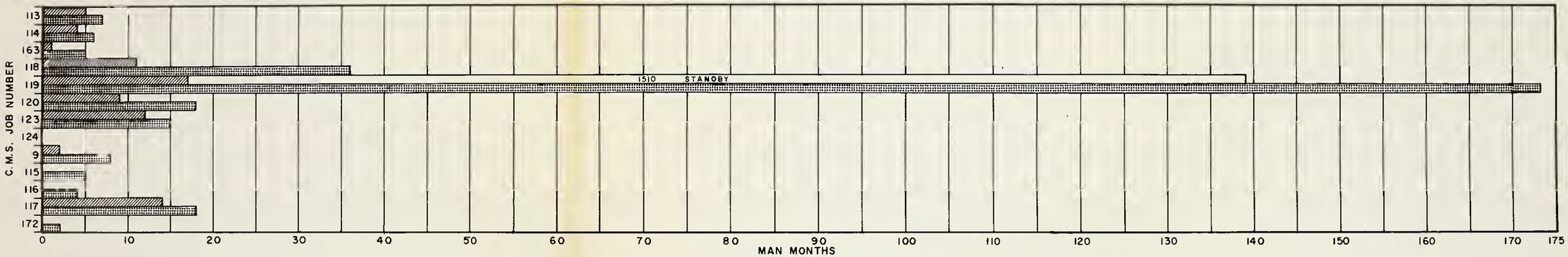


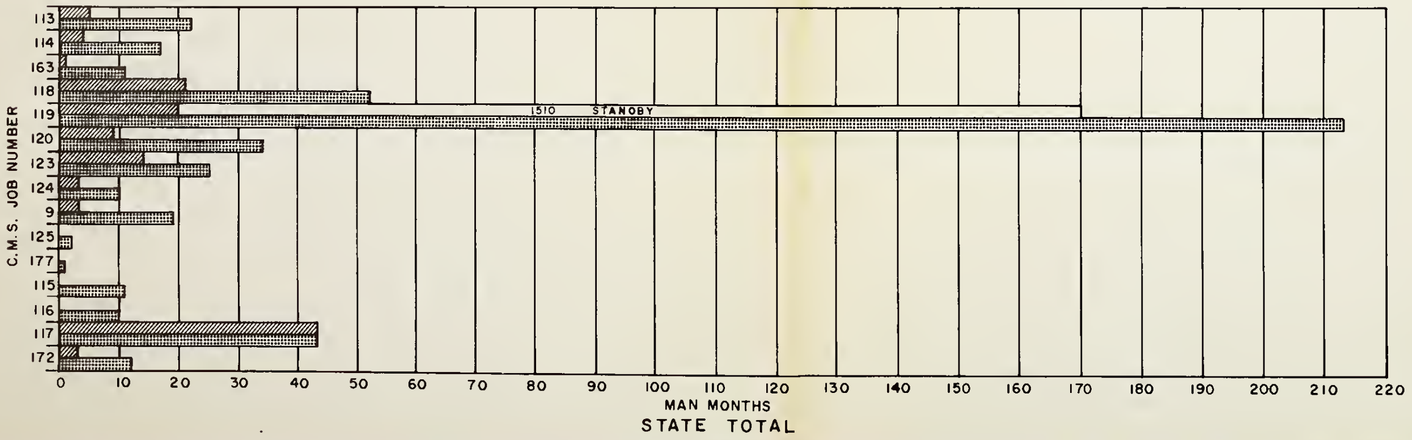
STATE TOTAL

TOTAL
RESOURCE DATA
PROJECT DEVELOPMENT
OPERATIONS

CALIFORNIA MANAGEMENT STUDY
PROGRAM ANALYSIS
PROTECTION
SHEET 2 OF 2







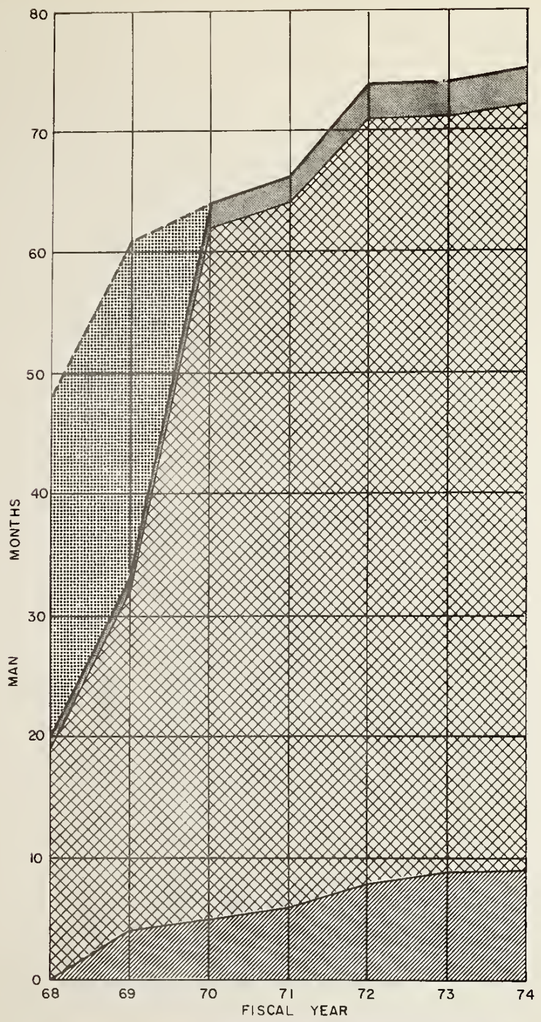
JOB NO. DEFINITIONS

- 9 Fire Fighing R.T.
- 113 Education
- 114 Fire Trespass
- 115 Hazard Reduction
- 116 Fire Break Construction
- 117 Fire Planning
- 118 Training Fire Crew
- 119 Tools, Supplies & Temporary Facilities
- 120 Detection
- 123 Communications
- 124 Contract Supervision
- 125 Contract-State
- 163 Fire Break Maintenance
- 172 Technical Training
- 177 Contract-Other Agency

▨ FISCAL YEAR-1968

▤ FISCAL YEAR-1974

CALIFORNIA MANAGEMENT STUDY
PROTECTION
WORK CATEGORY



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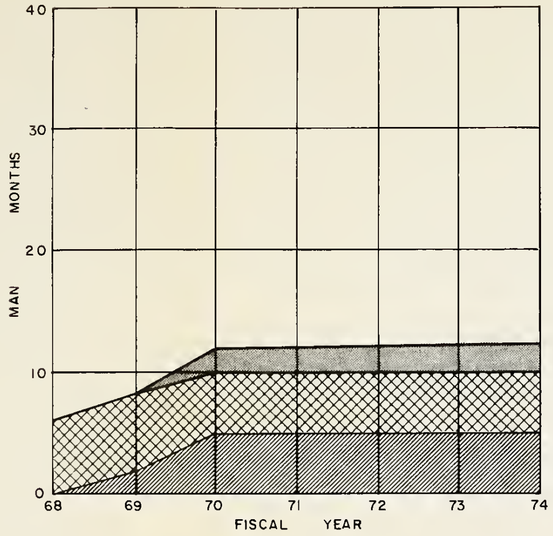

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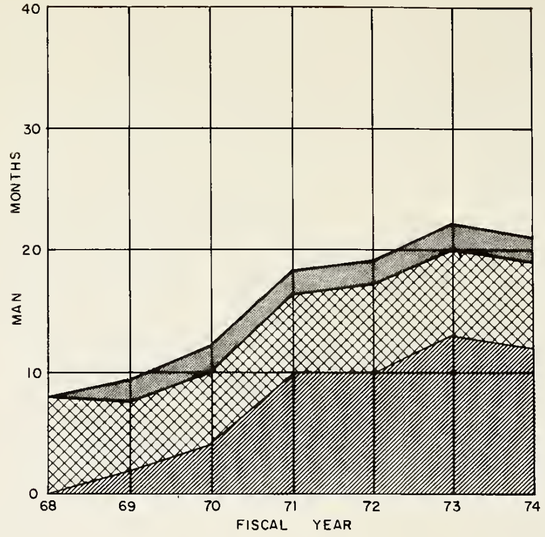

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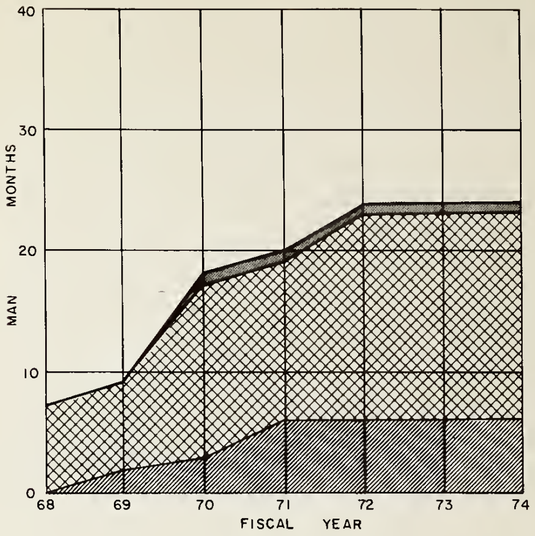

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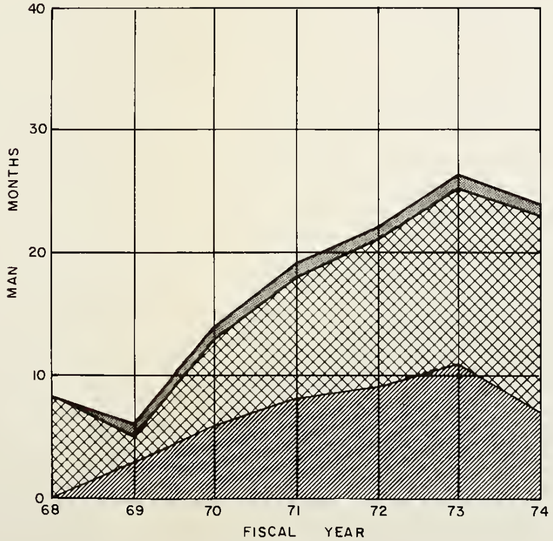

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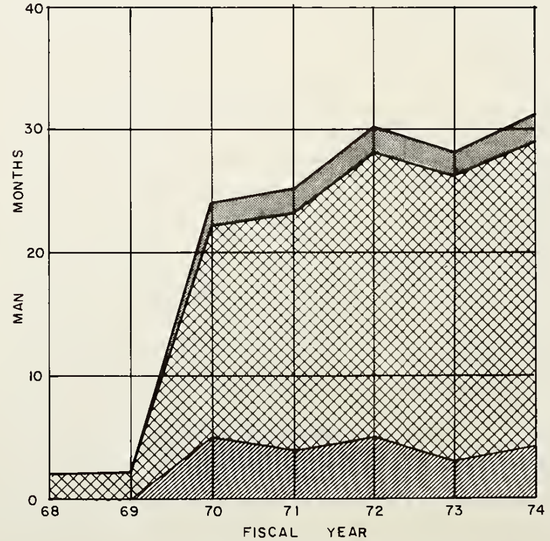

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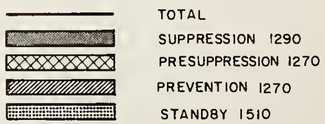
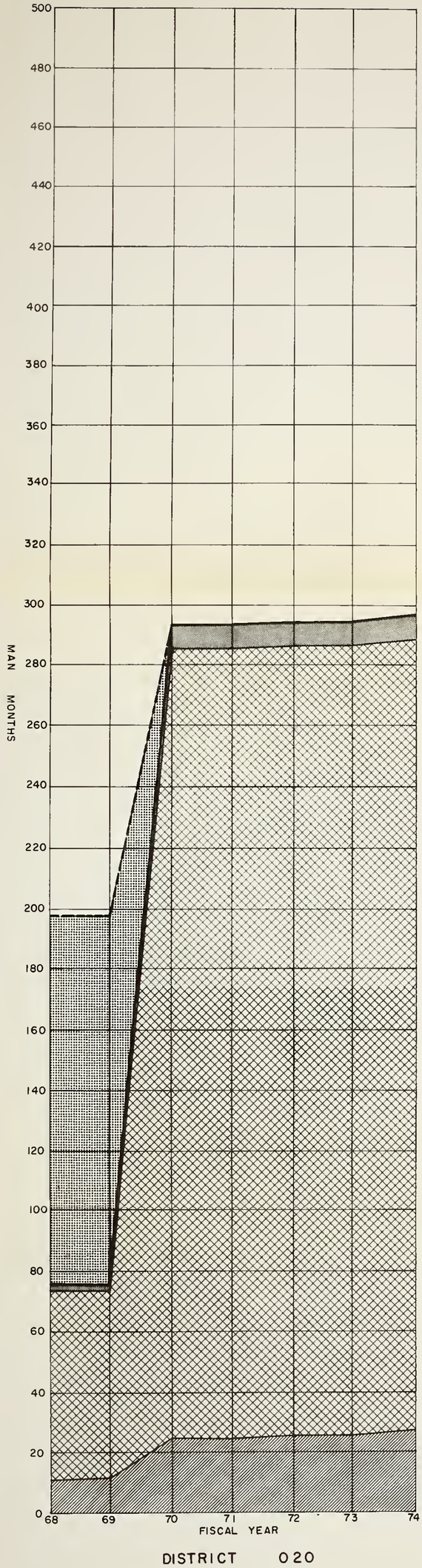


CALIFORNIA MANAGEMENT STUDY
PROTECTION
PREVENTION - PERSUPPRESSION
SHEET 1 OF 2



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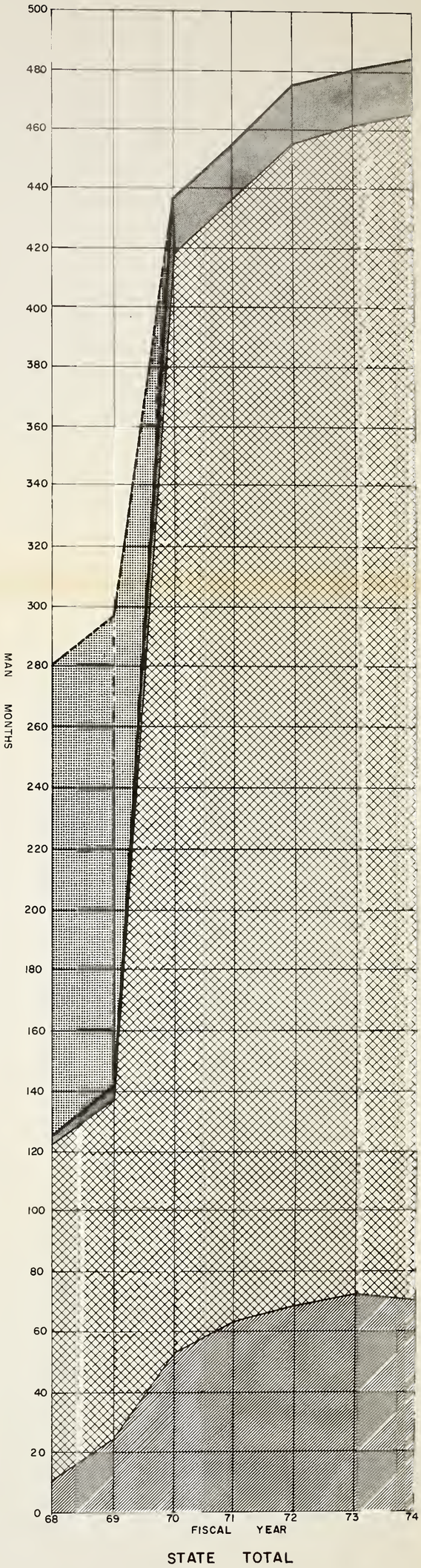
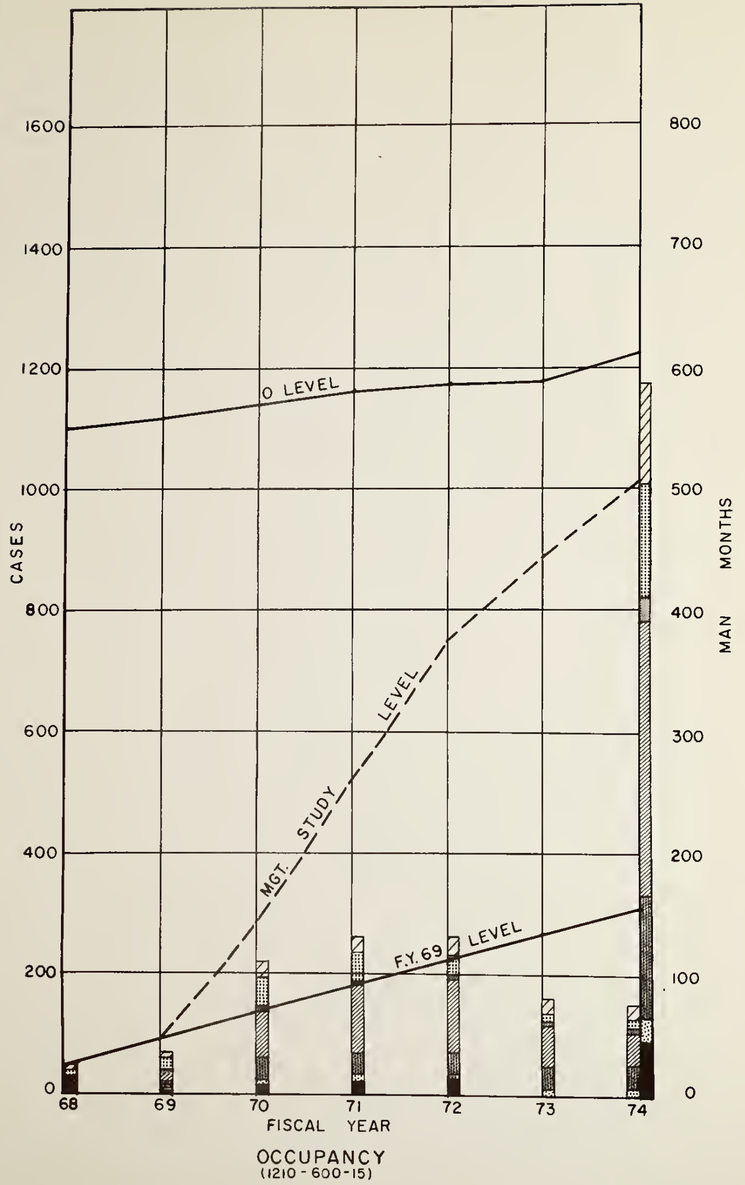


STATE TOTAL

TOTAL
SUPPRESSION 1290
PRESUPPRESSION 1270
PREVENTION 1270
STANOBY 1510

CALIFORNIA MANAGEMENT STUDY
PROTECTION
PREVENTION — PRESUPPRESSION
SHEET 2 OF 2



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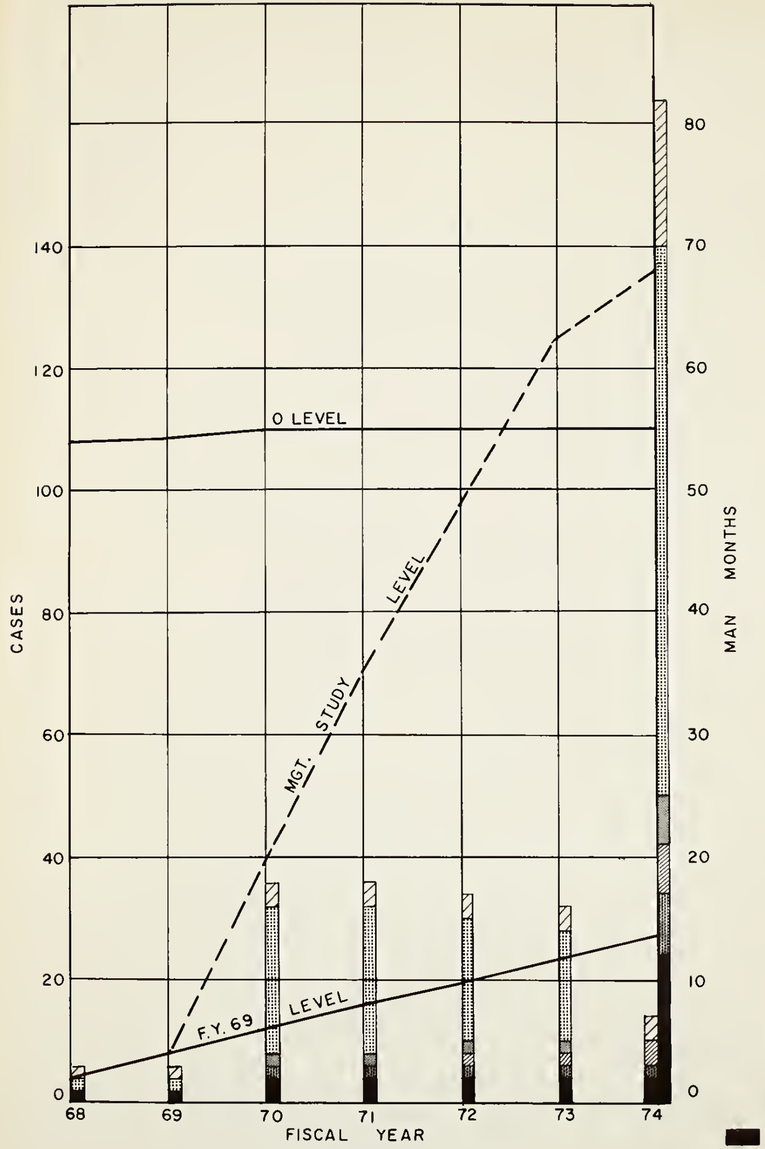
(1210-600-15)



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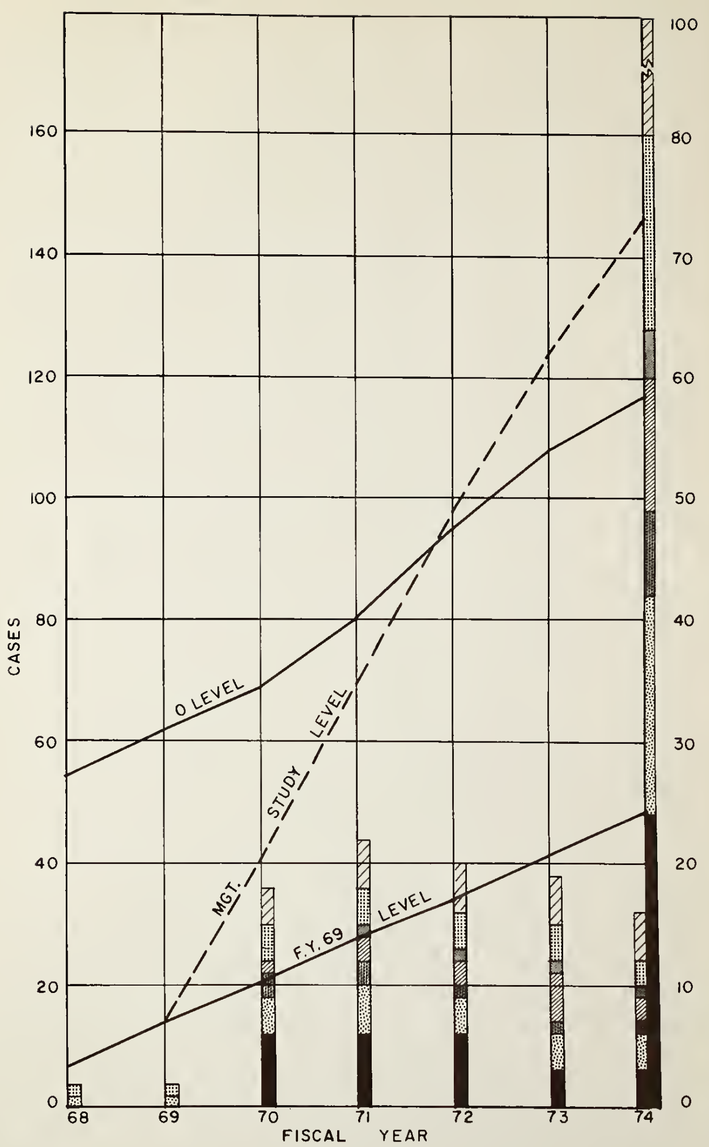
(1210-600-26)



GRAZING
(1220-330-55)

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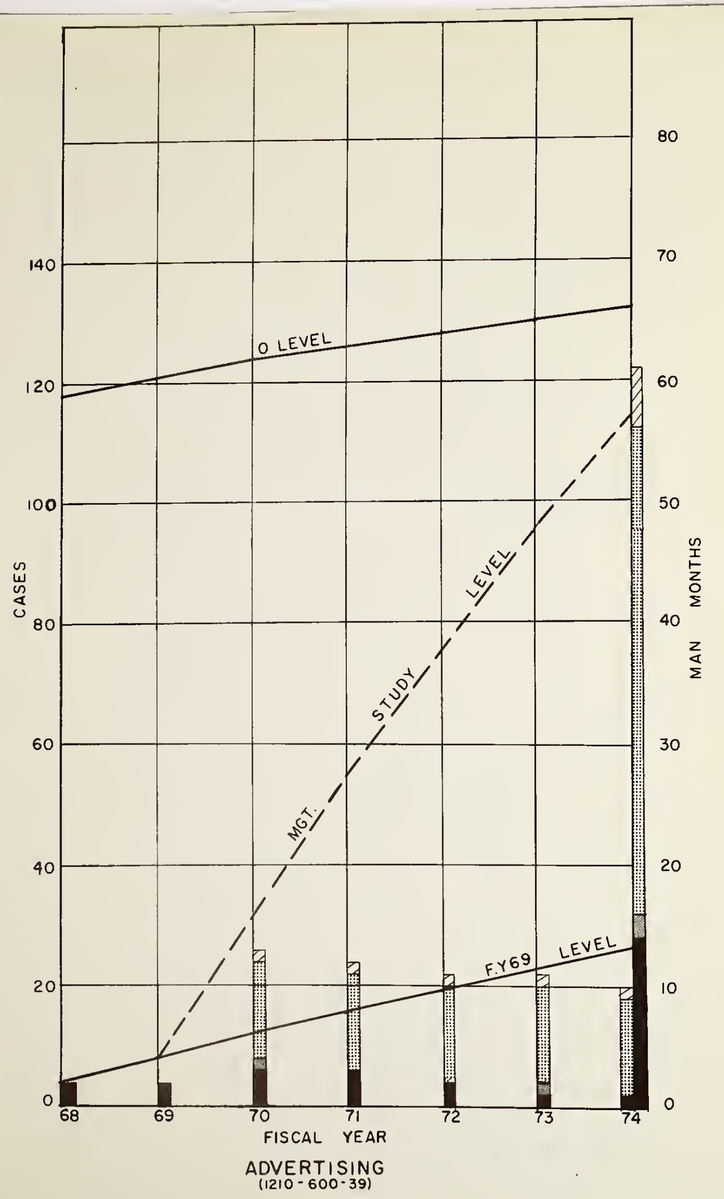
CALIFORNIA MANAGEMENT STUDY

TRESPASS GRAPHS



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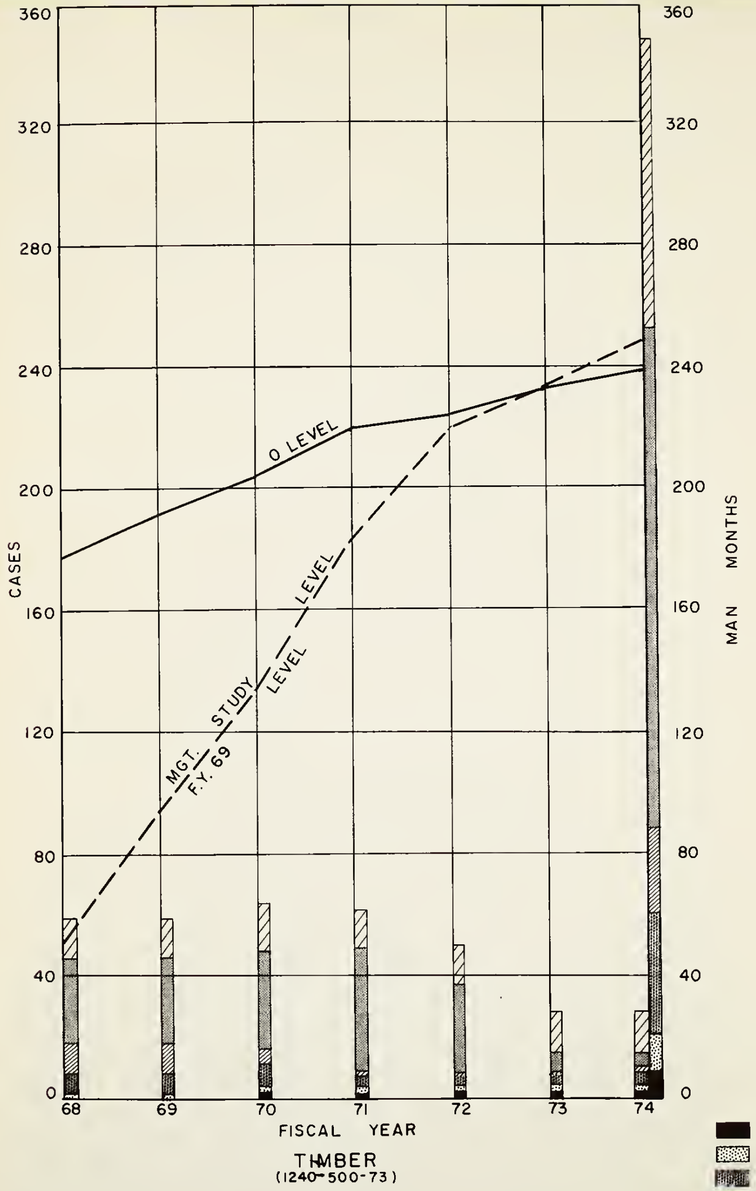
(1210-600-39)



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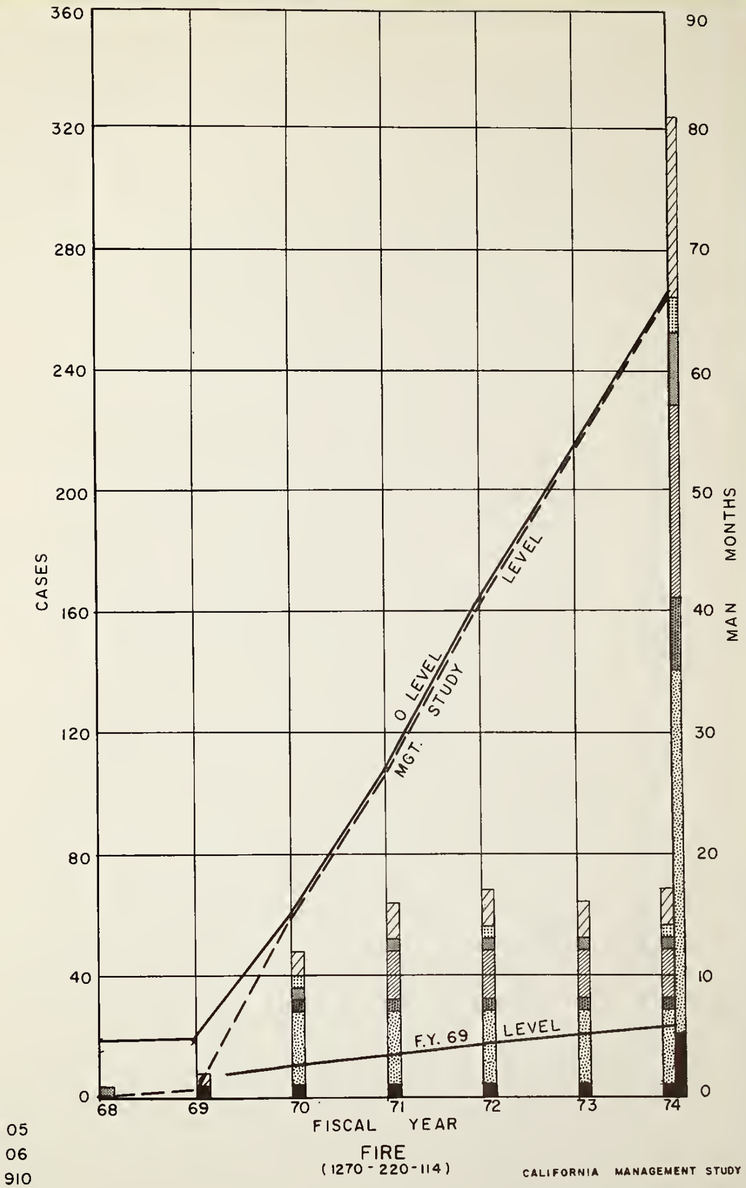

FIRE
(1270-220-114)

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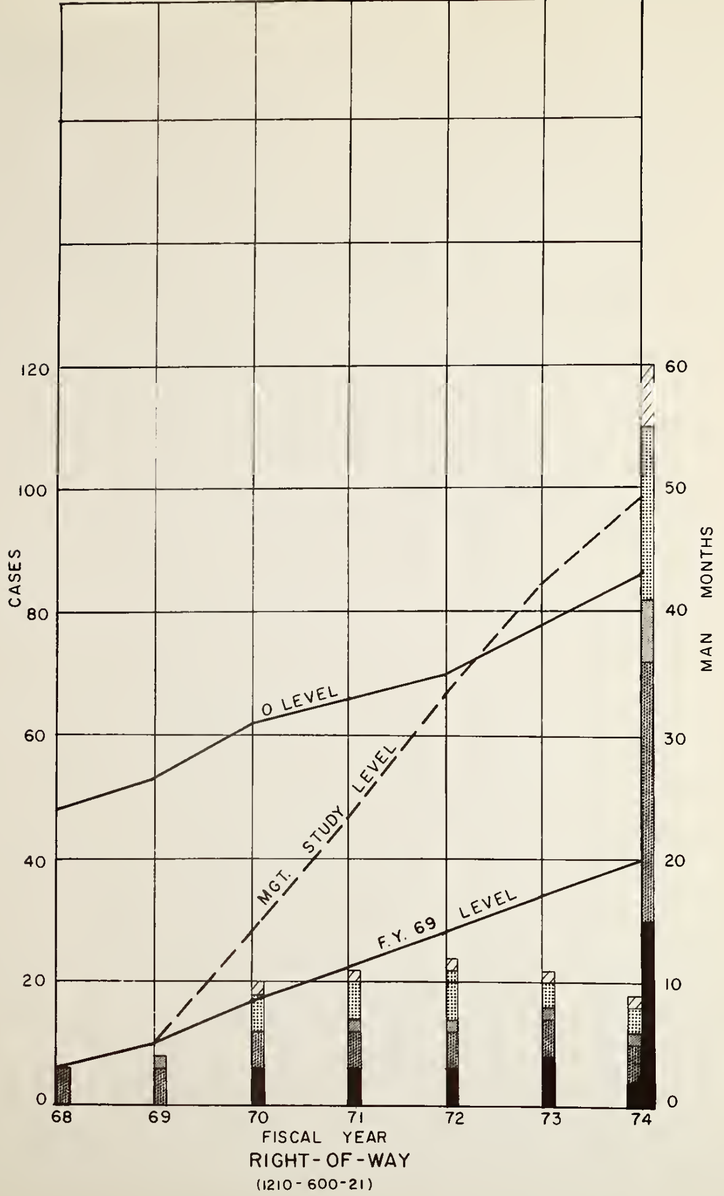
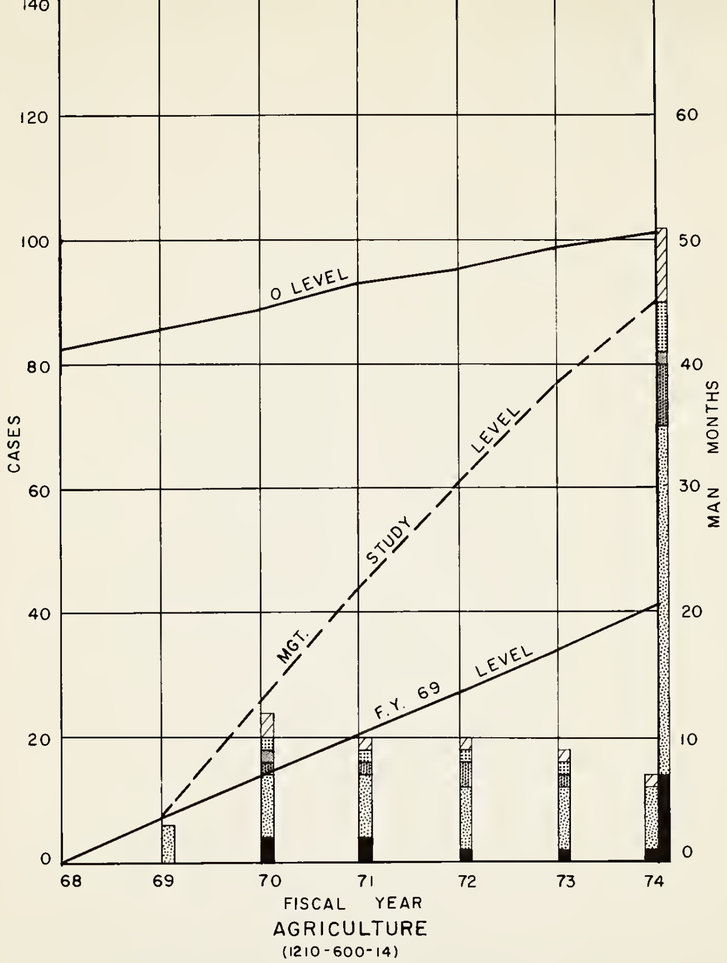
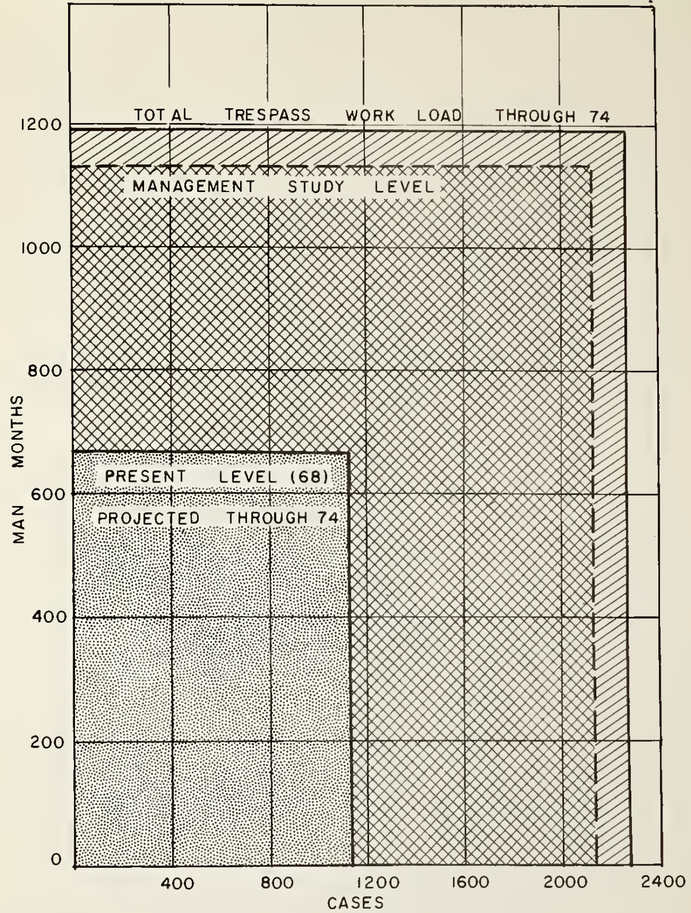
CALIFORNIA MANAGEMENT STUDY

TRESPASS GRAPHS







01
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910

CALIFORNIA MANAGEMENT STUDY

TRESPASS GRAPHS

CALIFORNIA MANAGEMENT STUDY

CADASTRAL SURVEY PROGRAM

A. General Highlights

With the population increase and the resulting public pressures on the public domain; an upward adjustment of land values is taking place. With resulting increase in values, the demand for surveys from both the private sector and the local government, where public domain is intermingled, is increasingly clamorous.

The need is not only to clarify government ownership at these mutual boundaries but to so identify them to make their use by the public possible and to permit their management.

The present staffing of the cadastral branch is inadequate in meeting the survey demands created by public useage, local government and other government agencies. Accordingly, the object of this study is to present a clear, concise and as factual as possibe report of the demand and need for an increased cadastral survey program.

The data for this study has been assembled from the California Management Study, Forest Service and the portion of the Cadastral Survey Inventory that has been accomplished. Much of the data in the CMS reflects the on-the-ground knowledge of the District Managers and the Chief of the Cadastral Branch. While most of the data has a rather firm experience factor some of the items such as conversion rates may have been over simplified. However, with mass of data reflecting such an overwhelming job to be done, it is felt that the small degree of accuracy sacrificed will not materially affect the validity of the conclusion and recommendations to be drawn.

In order to analyze the total workload and the functional interrelationship in the cadastral survey program, it was necessary to draw together the data into a more consolidated form. For this purpose several charts and graphs have been prepared showing various relationships. The first (Data Summary) is merely a summary of total work remaining and the man months expended by fiscal year and work code. The other graphs, Proposed Program Emphasis, Total Work and Program Analysis reflect different groupings of job output in man months by function by fiscal year and also by work accomplishments by FY 74 as versus the total need. A review of past work accomplishments which in many cases is unprogrammed indicates a need for analysis of related jobs, which by their nature should be identified with the program, but not included in the present work codes for purpose of this study. Accordingly, a broad category of work identified only as case load has been used.

The analysis of work emphasis by accomplishment during the seven year period of this study has been undertaken on a functional

grouping into five (5) broad spectrums. These are administration, open traverse surveys, closed traverse surveys, case load surveys, and remonumentation. The administration group includes work codes 110, 120, 150 and 160, with a total of nine job designations. The others are open traverse surveys (210, 220, 230), closed traverse surveys (310, 320, 330), case load surveys (240, 340) and remonumentation (410, 420, 430).

Perhaps the easiest and the most meaningful method of presentation is by percentage as shown on the following chart

Group	FY-68	FY-69	FY-70	FY-71	FY-72	FY-73	FY-74
Adm.	14	13	11	14	13	12	11
Open	12	8	5	4	3	3	2
Case	15	13	23	24	24	22	22
Closed	49	56	54	51	54	58	61
Remon.	10	10	7	7	6	5	4

From this chart it is obvious that the case load will by necessity show a larger portion of the activity and accordingly will require a much greater effort at the state level in programming. The second item which bears comment is the remonumentation group. The de-emphasis of this function is notcommensurate with its importance in a well balanced cadastral effort. This points to a weakness or lack of foresight wherein a remonumentation program for the public domain lands was not considered in time to be included into this study.

In analysis by work code, the Data Summary Charts provide a consolidation which permits a chronological method through FY 74 of determining the detailed growth. For years FY-68 and FY-69, the man months were limited to that which is presently authorized. This is twenty-nine (29) permanent positions and twenty-one (21) temporary positions in the Division of Engineering of which 275 man months are chargeable to 1400. In year FY-70 the only limits imposed were those of good judgement. Accordingly the following individual work code analysis is based on those paramenters.

1400 - 100 - 1 Manager This job at the present time requires 9 to 10 man months of on-the-job in-office effort plus 2 to 3 months for field direction and leave time. As the number of field party months increase, this requirement will also increase, therein requiring an assistant which will be programmed in related work codes.

1400 - 120 - 2 Administrative Support This includes the time spent on preparation of routine and special reports, on preparation of responses to inquires, on cooperation with other Federal Agencies and on such items that cannot be identified under other job numbers in this activity. The present work load requires approximately 12 MM, however, by delaying some portion of these requirements and by half doing others fewer man months have been scheduled. Based on present experience this job will increase by 4 to 5 times by FY-74.

120 - 133 Microfilming Includes all time necessary to convert cadastral plats and field notes to aperture card form. This project has been completed for the existing plats, but not for the field notes. Although this job cannot be assigned a high priority at this time, it should be accomplished within a 4 to 5 year period. Based on present experience in this field, it will require approximately 7 man years of effort to complete. Thereafter the expenditure of time will be reduced to about 1 man month or less per year.

120 - 164 Clerical This is the general clerical support necessary for the cadastral program. Experience to date indicates a growth need of several times.

150 - 3 Programming-Planning Includes all time of operating and clerical personnel in the broad base planning and programming. Past experience is the base.

160 - 4 Safety Approximately 1% of the total man months programmed should be devoted to job safety. This amounts to less than one hour every pay period.

160 - 29 Public & Coop Relations This at present requires about 1 MM per year in effort that cannot be identified as part of a certain job. It is anticipated that this will increase to 3 MM per year as the public lands become more valuable and as the population of this state continues to grow.

160 - 132 Survey Records Includes the time spent to provide for public contact in connection with survey records and to aid survey crews in research of the necessary records. That portion dealing with the public will be transferred to L & M Division with realignment of duties in FY-69.

1400 - 160 - 172 Training Technical Approximately 5% of total permanent time should be spent in formal and informal class type training. Experience to date, indicates that only about 1% is actually committed. By FY-74, we expect to reach the 3% mark.

210 - 134 New Surveys Includes on-the-ground operations work, computation work and associated activities performed at the site. No new open traverse surveys will be programmed until the protraction work is completed in FY-69. After this time, some open traverse will be required. It is anticipated that the total number of miles required will be about 500. The reduction of this need will require a moderate effort from FY-70 through FY-74 and a reduction thereafter. On a pipeline basis, the yearly requirement would be very small, decreasing with the increase in new closed traverse surveys. Criteria is 5 miles per man month.

210 - 135 Resurveys The status and programming of the resurveys is similar to that of the open traverse new surveys with the exception of number of miles which is estimated at 1200. Again many of these miles will be associated with the protraction work which will formally end in FY-69. This work will be programmed over a period in excess of 100 years. All open traverse type surveys will be discouraged with emphasis on the closed type of survey. Criteria is 4 miles per man month.

210 - 140 Protractions A major emphasis will be placed on getting field control during FY-68 and early FY-69. In order to meet the FY-69 deadline for completion of this project, with the limited man power available during these 2 years, it will be necessary to limit control to 230 miles. Criteria is 7 miles per man month.

220 - 134 New Survey Returns Criteria is 30 miles per man month.

220 - 135 Resurvey Returns Criteria is 20 miles per man month.

220 - 140 Protraction Returns Criteria is 20 miles per man month. Note: The returns are lagging the field accumulation by about 10 man months, however a

1400 - 220 - 140 (continued) reduction in man months will be accomplished by decreasing the amount of cross-checking. This will have to be done again in FY-69.

230 - 134 New Survey - Verify Criteria is 60 miles per man month.

230 - 135 Resurvey - Verify Criteria is 20 miles per man month.

230 - 140 Protractions - Verify Criteria is 40 miles per man month.

240 - 39 Advertising Trespass Includes the time necessary to field verify and to prepare documentation required. Of the districts total anticipated cases, it is estimated that only about 8 will require cadastral assistance. Criteria is 2 cases per man month.

240 - 21 Right-of-Way Trespass Includes the time necessary to field verify and to prepare documentation required. Of the many that occur each year, it is estimated that only 2 will require cadastral assistance. Criteria is 1 case per man month.

240 - 26 Material Sales Includes the time necessary to field verify and to prepare documentation required. Of the many that occur each year, it is estimated that only 2 to 4 per year will require cadastral assistance. Criteria is 2 cases per man month.

240 - 50 Access Includes the time necessary to field verify and to prepare documentation required. Estimate: Total Load - 200 cases. The complexity of those to date, indicate that about 3 MM per case will be required.

240 - 67 Precruise & Layout Includes the time necessary to field verify and to prepare documentation required. Approximately 2 out of the 40 to 50 cases per year requires the expert services of the cadastral surveyor. Criteria is 1 case per man month.

240 - 73 Timber Trespass Includes the time necessary to field verify and to prepare documentation required. Based on inventory and suspected cases, the total trespass load as relates to cadastral is about 35.

1400 - 240 - 73 (continued) Since these are normally in areas of no surveys, poor or fraudulent surveys, the effort in each is conservatively estimated at 5 man months per case.

240 - 114 Fire Trespass Includes the time necessary to field verify and to prepare documentation required. To date none of these has been of sufficient value or in lands of question. Accordingly, no time has been programmed. Criteria is 1 case per man month.

240 - 136 Soil & Watershed Includes the time necessary to field verify and to prepare documentation required. No annual program is anticipated. Only an occasional high value project would require verification of land ownership by a cadastral crew. Use one occurrence during a seven year period. Criteria is one case per 3 man months.

310 - 138 New Surveys Approximately 4,000,000 acres of land in this state requires an original survey. Included in this is about 100 sections of state school land. However, since much of this land is low in value and use, none of it is scheduled for survey in FY-68 or FY-69. For period beyond these years it will be programmed at a rate of less than 1% of the 4,000,000 acres per year. Criteria is 3 man months per 1,000 acres.

310 - 139 Resurveys The current need and pressure for resurveys far outweighs the need and pressure for original surveys. The major portion of the cadastral effort is, and will continue to be, directed toward this element. About 5,000,000 acres are known to require resurvey at this time. These lands are normally of greater value and in greater use than the unsurveyed lands. Accordingly, the survey effort here will be somewhat greater even though somewhat conservative at 1% plus. Criteria is 5 man months per 1,000 acres.

320 - 138 New Survey Criteria is 1 man month per 1,000 acres.

320 - 139 Resurveys Criteria is 3 man months per 2,000 acres.

330 - 138 New Survey Criteria is 1 man month per 4,000 acres.

330 - 139 Resurveys Criteria is 1 man month per 4,000 acres.

1400 - 340 - 14 Agriculture Includes the time necessary to field verify and to prepare documentation required by L & M. It is estimated that about 15 of some nearly a thousand cases will require cadastral action. Criteria is 1 case per 2 man months.

340 - 15 Occupancy Includes the time necessary to field verify and to prepare documentation required by L & M. Of some nearly 2,000 cases confirmed or suspected, 200 will require cadastral effort. Criteria is 1 case per 2 man months.

340 - 16 Public Sale Includes the time necessary to field verify and to prepare documentation required by L & M. Of several thousand potential sales, only a small number will require additional cadastral effort. An estimate of 500 or less appears valid. Criteria is 1 case per 5 man months.

340 - 17 Exchange Includes the time necessary to field verify and to prepare documentation required by L & M. Based on present known needs, an estimate of 130 exchange actions will require cadastral effort. Criteria is 1 case per 5 man months.

340 - 18 Selections Includes the time necessary to field verify and to prepare documentation required by L & M. Although no background material is available for estimating the number of cases that will require cadastral action, an assumption of between 2 to 5% appears reasonable. Accordingly, the total work load is estimated at 20 cases. Criteria is 1 case per 5 man months.

340 - 19 R & P P Includes the time necessary to field verify and to prepare documentation required by L & M. This is the same as 1400-340-18 with the exception that a percent of less than five appears more reasonable. Use 160 cases.

340 - 55 Range Includes the time necessary to field verify and to prepare documentation required by L & M. The necessity to use cadastral surveys here, due to low economical values is very remote. Accordingly, an estimate of 1 every 5 to 10 years would appear logical. Criteria is 1 case per 2 man months.

1400 - 410 - 141 Remonumentation This program's major emphasis is in the Forest Service Lands. The FS estimates that there are 120,000 corners in California to be searched. Of these, 60,000 will be scheduled for examination and 40,000 must be remonumented. Experience to date, indicates that about 400 corners per man-year is normal. This does not include FS time. Criteria is 45 monuments per man month.

420 - 141 Remonumentation, Returns Criteria is 100 monuments per man month.

430 - 141 Remonumentation, Verify Criteria is 400 monuments per man month.

The criteria shown in each work code is based on past experience and a best judgement factor. To reiterate individual work code criteria may be grossly in error, but the aggregate totals appear reasonable. The experience and judgement factors used as an aid in determining criteria is as follows:

1. The normal field party in timbered and mountainous land consists of 6 men: 1 transitman, 2 chainmen, 1 flagman and 2 axemen. Multiple crews also require a Supervisory Cadastral Surveyor and a handy man. Desert surveys normally consist of 5 men, thus giving an overall average of 6 men per party.

2. Past experience shows that a single survey party averages 20 days per month on line, with a daily progress of ¼ mile in timbered mountainous land and 1 to 3 miles in the desert. About 80% of our effort is in mountainous forested areas which include most of our special problems.

3. These values for field work, plus office support time, plus estimated miles per case were used in arriving at the number of man months per unit.

4. Man months of office time include the actual case connected effort and general non-case effort. This office time amounts to about 40% of our total annual man months scheduled.

Under the category of related inputs, that portion of this study which departs from the given manual work code definitions will be analyzed. It has been identified as case load work and given new work code numbers of 240 and 340. It consists of 15 jobs of which three (3) are classified as recurring. These jobs are directly related to the on-going locally identified L & M and RPM programs and could have been placed into the existing work code system.

However, their identity would have been lost and the clear functional interrelationship now shown between activities would have been obscured. Additionally, these individual jobs may in many cases not require the extensive treatment of our normal surveys. Although, in practice every effort is made to formalize the survey through an increase in effort if the time is available. As an example, in the case of a timber trespass, where it is only necessary to reestablish a few miles of open traverse, and additional effort to complete a closed traverse survey may be undertaken. Further, it may only be necessary to show the trespassor and/or his surveyor the method of reestablishing the line or where he was in error in his method. Thus, it would not be necessary to formalize. While jobs like these may seem minor in relationship to the total, they do represent fifteen (15%) percent of the total present cadastral AWP man power. By FY-74, it is anticipated that this will grow to twenty two percent (22%).

Directives and advices for FY-68 have been reviewed to determine their mandatory requirements and to quantify those requirements as an aid in analysis. In the Cadastral program, these advices and directives, with a few exceptions, are general in nature making quantification exceedingly difficult. This is doubly true wherein no guide lines are established for a time span. Nevertheless, these guidances do provide for program emphasis from which certain conclusions can be drawn. To quote excerpts:

> "Programming of cadastral survey work shall be directed to the fulfillment of the responsibilities to BLM and to other public land management bureaus. Complete correlation of the needs of our major resource management activities must be achieved. Cadastral surveying must continue to increase its role in the Bureau's program and contribute to the accomplishment of its goals.
>
> "Continue to program, at a level consistent with the need, the small tract surveys made necessary by the Mining Claims Occupancy Act, P.L. 87-851, and P.L. 88-608, which provides temporary authority for the sale of other public lands.
>
> "Surveys required for the successful prosecution of numerous trespass cases required by the forestry and other resources management programs shall be re-emphasized in this fiscal year.
>
> "There is substantial evidence that several of the States have a backlog of "surveyed but uncompleted projects", awaiting final note writing and platting before being sent to the Washington Office for approval. Field work must be followed immediately with plat work to produce

a final product.

"It is urgent that we move forward on the protraction surveys. This is especially true in the States of Idaho and California. It is imperative that office work in these States be adequately programmed to ensure completion of protraction surveys in FY 1968 in order to be prepared for RIP in those States.

"Every effort should be made to continue the recruiting and training program according to the State's needs. With the ceiling on manpower we must depend upon modern survey equipment and methods and thoroughly trained and experienced personnel to maintain the heavy work schedule.

"Increase the cadastral survey program in FY's 1968 to 1971 to fully support the major resource division programs of the Bureau and the needs of other Government agencies. The contemplated growth of the resource divisions will require complete coordination by the Division of Engineering with the resource divisions.

"Funds transferred from the Forest Service will be used mainly for surveys made necessary by the Bureau's refusal to accept as identified, original corners located under the Forest Service boundary, posting, and marking project. Unless associated with surveys generated through the boundary, posting and marking project, we will continue to finance from our regular cadastral survey funds our cooperative remonumentation program.

"Accordingly, your regular program for work should continue to carry at least the present corner identification work and the surveys normally done."

Using these as a basis for determining mandatory work by directive, a conservative estimate of nearly 600 man months would be required to maintain status-quo in FY-68.

In personnel, the forecast is for an increase from the present 275 man months to 1057 man months by FY 1974. As can be seen, this is a growth rate of nearly four times as compared to a rate of between two and three for the state as a whole. This emphasis in personnel staffing reflects the concern of the state in this program. The staffing level recommended herein, not only sets the number of positions, but also recommends grades and the division between permanent and temporary positions. This area is treated in greater detail in a later chapter in this study. Areas in personnel needing additional research and comments are those proposed by the Washington Office Study. Much thought has been given to some of these problems

dealing with the well-being of the individual, but only a few have been explored in enough depth to draw conclusions. These will be commented on in detail in following paragraphs.

Personnel in support of activity 1400 will be drawn from activity 1700 for management, and from 1800 for the preparation of the plats. the 1700 activity probably contributes about 12 man months per year to direct and indirect support, while 1800 provides about 110 to 120 man months. Additional related effort of about 8 man months will be required in order to accomplish mineral survey reviews in 7200 activity.

Special highlights here refer to four areas of concern which need additional treatment. These are resurveys, remonumentation, backlog and personnel.

In resurveys, the need basically exists because of lost or obliterated corners necessitating reestablishment and/or because of partially or totally fraudulant surveys during the period of 1870 to 1890. During this period an association was formed, referred to as the "Benson Syndicate", which was awarded contracts for the survey of over 900 townships in California. These surveys and loss of monuments, by-and-large, are responsible for the greater percentage of the requested resurveys. By 1974, only five percent (5%) of the total estimated resurvey acreage of 5,000,000 will have been accomplished with a planned increase of party months of about four (4) times. It is very probable that this effort will not be sufficient to support the total bureau needs; since it is questionable if not almost impossible to properly administer lands until you know their location and exact boundaries.

Remonumentation as referred to in this study has been limited to that program initiated by the Forest Service. It is interesting to note the emphasis the Forest Service places on search and remonumentation of corners before their destruction or obliteration. The following table compares our effort in their behalf to theirs in man months and dollars.

F.S. REMONUMENTATION

FY	Cost in $1000	Man Months
64	60	Unknown
65	62	Unknown
66	62	Unknown
67	140	168
68	196	216

BLM SUPPORT

FY	Cost in $1000	Man Months
66	26	27
67	32	31
68	31	28

It is felt, that this study has failed through omission of a similar program for public domain, to properly place the priorities of work accomplishment into proper perspective. A program of magnitude equal to or greater than that being pursued by the Forest Service is of definite need. An economic study of remonumentation as compared to resurvey would in all probability show a substantial savings. With some 100 plus years having passed since the first monuments were set and based on field experience pertaining to their loss; the problem of remonumentation must be emphasized, as soon as possible, to gain maximum benefits.

The current and continuing backlog of projects requiring both additional field and office time is becoming a real problem. It will require a monumental effort in order to reduce it to current pipeline level. Its creation, is properly attributed to an attempt to superimpose all unprogrammed requests during a several year period on top of a program already short of man power. The continuing emphasis on taking care of hot spots has notalleviated the trouble.

At present the only solution appears to be an increase in man power, to eliminate the backlog now estimated at 260 field man months and 150 office man months for 50 plus groups. Of these, 16 will be complete in plat form by the end of FY-68.

Personnel highlights will herein refer to three related general topics which are in addition to the items discussed in the chapter on personnel. These are in direct response to the Washington Office Study. One will deal with the man and his family, the second with organization to handle both field and office requirements and the third office administration.

The first item has been discussed in joint session with the men directly concerned; that is the cadastral surveyor. In these sessions, items discussed were (1) stationing of a crew at the district office and funding them through the District Manager, (2) stationing of a crew at the district office but keeping complete control at the state office, (3) a combination of 1 and 2 wherein the DM will provide for quarters, certain assistance and hiring of temporary help while the state office gives the job assignment and day to day operating instructions, (4) work shift (example ten days on and four off), (5) assignment of crews at select districts and the state office and (6) transfer the function to service center and work out of there. Probably the

most significant comments were those relating to the possible decrease in the individual party chief's authority and to the solid rejection of item four and six. Most all agreed that a trial period for items three and five would be desirable at one district should an expansion in personnel assigned take place. This could lead to further evaluation and elimination or expansion of the suggestion.

The second, dealing with office versus field time also has been much discussed particularly in view of our present backlog. All are in agreement that a survey does not meet its full requirement until it is an approved plat. Accordingly the ratio of field time to office time should be balanced with this as the criteria. Future programming will attempt to provide for the desired balance. Efforts will be made to resist disruption caused by imposed unprogrammed work.

Last, is the administrative problem in meeting the every increasing demand of the public to work with or to pass on decisions relating to mutual boundaries. The average number of pieces of technical correspondence which must be answered is now three (3) a day. This item alone requires more than a man year of office administrative effort in research and analysis. Additional items which are in themselves also of considered significance are the responding to two (2) calls from the public sector per day and at least three (3) weekly office visits. These are considered in excess of that which the technical expertise in the cadastral office can now do in a normal work day. Accordingly, it has been necessary to detail a cadastral surveyor to aid as an office engineer. This public demand work has every indication of increasing in magnitude and will have to be considered in future years.

This study shows the substantial role the cadastral program must play in the overall bureau multiple use concept. The following combined recommendations and conclusions are the means by which this can be accomplished.

1. The present study does not provide for a remonumentation program on the public domain. This is an essential program and should be staffed at a level comparable to the Forest Service.

2. The accomplishment of seven percent (7%) of the known work by 1974 should be considered as the minimum acceptable and the staff level should continue to increase well beyond 1974.

3. The emphasis on case load work is essential for the study, but should not be construed as a recommendation to add more work codes.

4. Closed traverse surveys must be emphasized and co-ordinated into the case load work in order to effect the best utilization of man power.

5. The administrative work load will continue to rise due to public demand and staffing must be provided to meet this demand.

6. Present support of other government agencies should be adequate not the minimum. Accordingly, more effort must be expended in this area.

7. The present staff is inadequate and should be increased. Supplemental help through the service centers and through improved techniques is a must.

8. The present cadastral study by the Washington Office is necessary to explore in greater depth the above conclusions and recommendations.

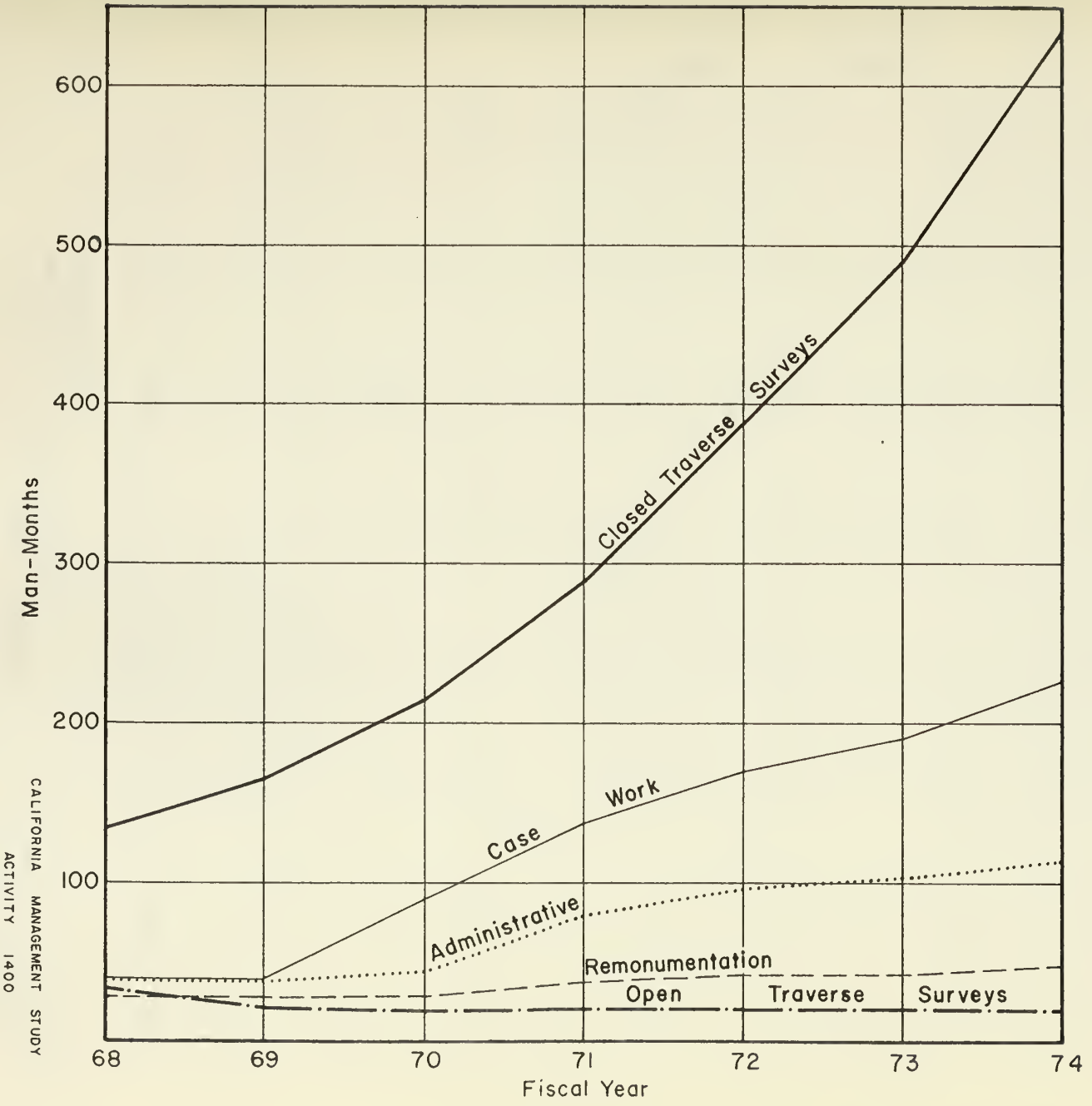
	WORK CODE	JOB NO.	FY 68		FY 69		FY 70		FY 71		FY 72		FY 73		FY 74		STATUS	
			TW	MM	TW	MM	TW	MM	TW	MM	TW	MM	TW	MM	TW	MM	R	N
MAN MONTHS	110	1		12		12		12		12		12		12		12	X	
	120	2		3		4		8		12		12		12		14	X	
	120	133		1		1		2		20		20		20		20		X
	120	164		6		6		9		14		20		24		30	X	
	150	3		2		2		2		3		4		4		5	X	
	160	4		1		1		2		5		7		9		10	X	
	160	29		1		0		1		2		3		3		3	X	
	160	132		11		11		6		6		8		8		10	X	
	160	172		2		2		3		8		10		10		12	X	
	SUBTOTAL			39		39		45		82		96		102		116		
MILES	210	134	500	0	500	0	500	12	440	12	380	12	320	12	260	12		X
	210	135	1200	3	1188	2	1180	5	1160	5	1140	5	1120	5	1100	5		X
	210	140	230	24	60	8	0	0	0	0	0	0	0	0	0	0		X
	220	134	500	0	500	0	500	1	470	2	410	2	350	2	290	2		X
	220	135	1200	0	1200	1	1180	1	1160	1	1140	1	1120	1	1100	1		X
	220	140	370	5	170	8	0	0	0	0	0	0	0	0	0	0		X
	230	134	500	0	500	0	500	1	470	1	430	1	390	1	330	1		X
	230	135	1200	0	1200	1	1180	1	1170	1	1150	1	1130	1	1110	1		X
	230	140	400	2	200	2	0	0	0	0	0	0	0	0	0	0		X
	SUBTOTAL			34		22		21		22		22		22		22		
CASES	240	39	8	0	8	0	8	1	6	0	6	1	5	1	4	1		X
	240	21	2	0	2	0	2	2	2	2	2	2	2	2	2	2	X	
	240	26	2	0	2	0	2	1	2	1	2	1	2	1	2	1	X	
	240	50	45	3	44	3	43	6	41	12	37	18	31	24	23	24		X
	240	67	2	0	2	0	2	1	2	2	2	2	2	2	2	2	X	
	240	73	35	2	34	5	33	20	29	25	24	30	18	40	10	50		X
	240	136	0	0	0	0	0	0	0	0	0	0	0	0	1	0		X
	240	114	0	0	0	0	0	0	0	0	0	0	0	0	1	0		X
	SUBTOTAL			5		8		31		42		54		70		80		

133.

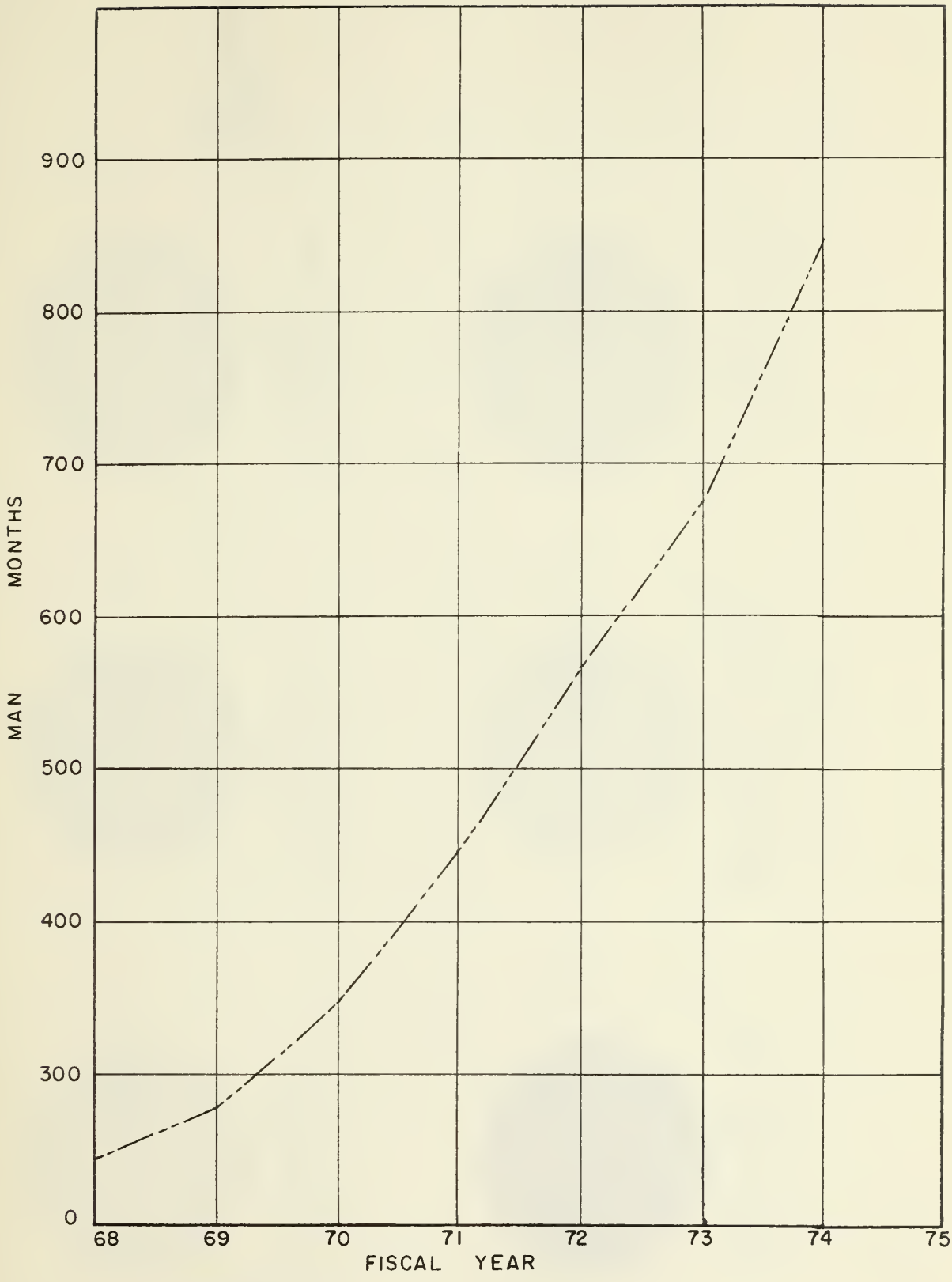
CALIFORNIA MANAGEMENT STUDY
DATA SUMMARY
SHEET 1 OF 2

	WORK CODE	JOB NO.	FY 68		FY 69		FY 70		FY 71		FY 72		FY 73		FY 74		STATUS	
			TW	MM	TW	MM	TW	MM	TW	MM	TW	MM	TW	MM	TW	MM	R	N
1000 ACRES	310	138	4000	0	4000	3	3999	6	3997	9	3994	18	3988	24	3980	24		X
	310	139	5000	106	4970	125	4945	160	4913	210	4871	280	4815	350	4745	450		X
	320	138	4000	0	4000	1	3999	0	3999	2	3997	6	3991	8	3983	8		X
	320	139	5000	25	4977	30	4957	42	4929	60	4889	75	4839	90	4779	135		X
	330	138	4000	0	4000	1	3999	0	3999	1	3997	2	3991	2	3983	2		X
	330	139	5000	4	4985	5	4965	6	4941	8	4909	10	4869	14	4813	22		X
	SUBTOTAL			135		165		214		290		391		488		641		
CASES	340	14	15	0	15	0	15	2	14	2	13	2	12	2	11	2		X
	340	15	200	6	197	6	194	16	186	24	174	40	154	40	134	48		X
	340	16	500	4	499	5	498	5	497	15	494	20	490	20	486	25		X
	340	17	130	15	127	5	126	10	124	15	121	15	118	20	114	25		X
	340	18	20	10	18	10	16	15	13	20	9	20	5	20	1	25		X
	340	19	160	0	160	5	159	10	157	20	153	20	149	20	145	25		X
	340	55	1	0	1	0	1	0	1	0	1	0	1	0	1	0		X
	SUBTOTAL			35		31		58		96		117		122		150		
10 MONS.	410	141	4000	18	3920	18	3840	18	3760	27	3640	27	3520	27	3400	33		X
	420	141	4000	7	3930	8	3850	8	3770	8	3690	12	3570	12	3450	12		X
	430	141	4000	2	3930	2	3850	2	3770	2	3690	3	3570	3	3450	3		X
	SUBTOTAL			27		28		28		37		42		42		48		
	TOTALS			275		293		397		569		722		846		1057		

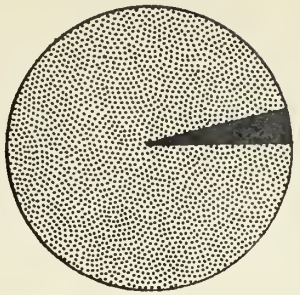
CALIFORNIA DATA MANAGEMENT SUMMARY STUDY
SHEET 2 OF 2



CALIFORNIA MANAGEMENT STUDY
ACTIVITY 1400
PROGRAM EMPHASIS



CALIFORNIA MANAGEMENT STUDY
PROGRAM ANALYSIS
CADASTRAL

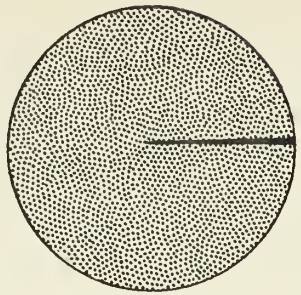


15%

Remonumentation

TW = 40000 Monuments

Job No. 141

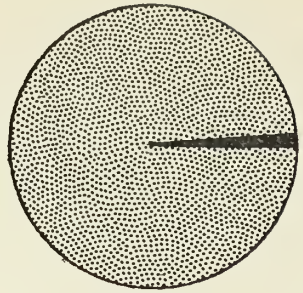


0.5%

New Surveys

TW = 4,000,000 Acres

Job No. 138



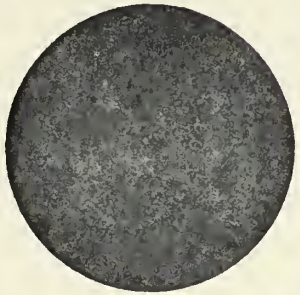
5%

Resurveys

TW = 5,000,000 Acres

Job No. 139

NOTE:
Total Accomplishments by F.Y. 74 as related to Total Work

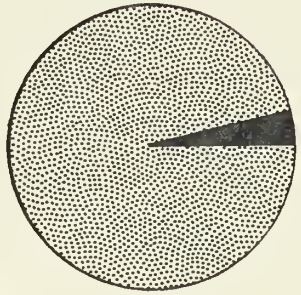


100%

Recurrent Case Load

TW = 5 Man Months / Year

Job No. 21, 26, 27

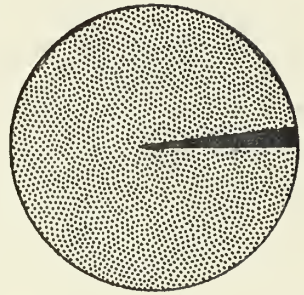


13%

Non-Recurrent Case Load

TW = 4800 Man Months

Job No's 39, 50, 73, 114, 136
14, 15, 16, 17, 18, 19, 55.



7%

Total

TW = 60000 Man Months

Job No's All 1400

CALIFORNIA MANAGEMENT STUDY
ACTIVITY 1400
TOTAL WORK

CALIFORNIA MANAGEMENT STUDY

ROADS PROGRAM

A. General Highlights

In order to support the Resource, Lands, and Minerals programs as projected into the year 1974 a Roads Program based on foreseeable needs has been developed.

A total of 4,652 miles of roads to be constructed have been identified by this Study. Of these, 600 miles have been proposed for grading through FY-74. A total of approximately 2,000 MM would be required in these seven years. The construction schedule would amount to around 13% of those miles identified. At the same time, the manpower requirements would increase from 100 MM in FY-68 to near 500 MM in FY-74. The graph entitled "State Totals--Construction--Maintenance" shows MM totals required to support the construction and maintenance schedules. The graph entitled "Total Work Load--Miles" indicates accumulative progress of road construction proposed.

It was determined that an analysis of the roads program could be done by studying the MM's required for Survey, Design, and Review. These are job numbers 301, 302, 303 under work code 200. Man months for Administration, Inspection, and Layout are also indicative. These are job numbers 304 and 305 under work code 411. The chart entitled "State Totals--Miles and MM" presents job numbers 301, 302, 303 as they relate to miles of survey, design and review in work code 200, and the relationship of job numbers 304 and 305 in work code 411 to miles to be constructed. It is evident from this chart that a significant increase in these job numbers is anticipated over those in the present AWP for FY-68. The manpower requirements shown in this chart do not include Administrative Support (Job No. 2), Clerical (Job No. 164), Program Planning (Job No. 3), Technical Training (Job No. 172), and Safety (Job No. 4). A factor of 1.2 to be applied to the totals under work codes 200 and 411 is suggested as appropriate for determining total needs. Surfacing, under work code 412, while important, was not included for clarity of discussion. All roads graded will not require surfacing.

The Program Advices received for roads gives an indication of a schedule (level of construction) for the Program Years. For instance the FY-69 Advices indicated the following schedule for California:

FY-1969	FY- 1970	FY-1971	FY-1972
500,000	700,000	1,000,000	1,200,000

The study, based on an average cost of $15,000 per mile would indicate the following:

1. Job No. 3100 200 301 $\frac{2 \text{ mi}}{\text{MM}}$ X 33 mi = 16 MM
2. Job No. 3100 200 302 $\frac{2 \text{ mi}}{\text{MM}}$ X 33 mi = 17 MM
3. Job No. 3100 200 303 $\frac{7 \text{ mi}}{\text{MM}}$ X 33 mi = $\frac{5 \text{ MM}}{38 \text{ MM}}$

At an average cost of $1,000 per man month, these three job numbers would require $38,000 plus the 1.2 factor for a total of $45,600. This would amount to approximately 11% of construction costs.

Easement acquisition funds should be made available the year after survey and design, and at least one year prior to scheduled construction. The Easement section describes the acquisition program and problems for California.

The total work for Roads Maintenance is described by the charts entitled "State Totals--Maintenance--MM" and by "State Totals--Maintenance--Miles". It was determined that an analysis could be made by comparing Force Account Maintenance (Job No. 219) which includes "Preventive" and "Corrective" Maintenance, with Contract Maintenance (Job No. 220) which includes "Corrective" and "Preventive". This chart "State Totals--Maintenance--MM" indicates a significant increase in manpower needs in the years following the FY-68 AWP. This is, of course, due in part to an accelerated construction program. The chart also indicates that we have probably undermanned the maintenance effort in FY-68, according to the job identified by the study. It is significant to note that the State Program described by this chart indicates a much larger increase in the number of miles to be maintained by contract. The 17 MM increase between FY-70 and FY-74 in Force Account Maintenance reflects an increase of approximately 500 miles to be maintained by BLM forces. The 20 MM increase in Contract Maintenance indicates an increase of approximately 1,500 miles to be maintained by contract. Consequently, it is apparent that the emphasis is on Contract Maintenance.

A review of the chart entitled "State Totals--Maintenance--Miles" shows the entire work load in maintenance. However, it must be recognized that "preventive" and "corrective" maintenance may be done on the same mile. The maintenance requirements are dictated not only by the 3100 construction, but by Timber Sale Construction and purchases.

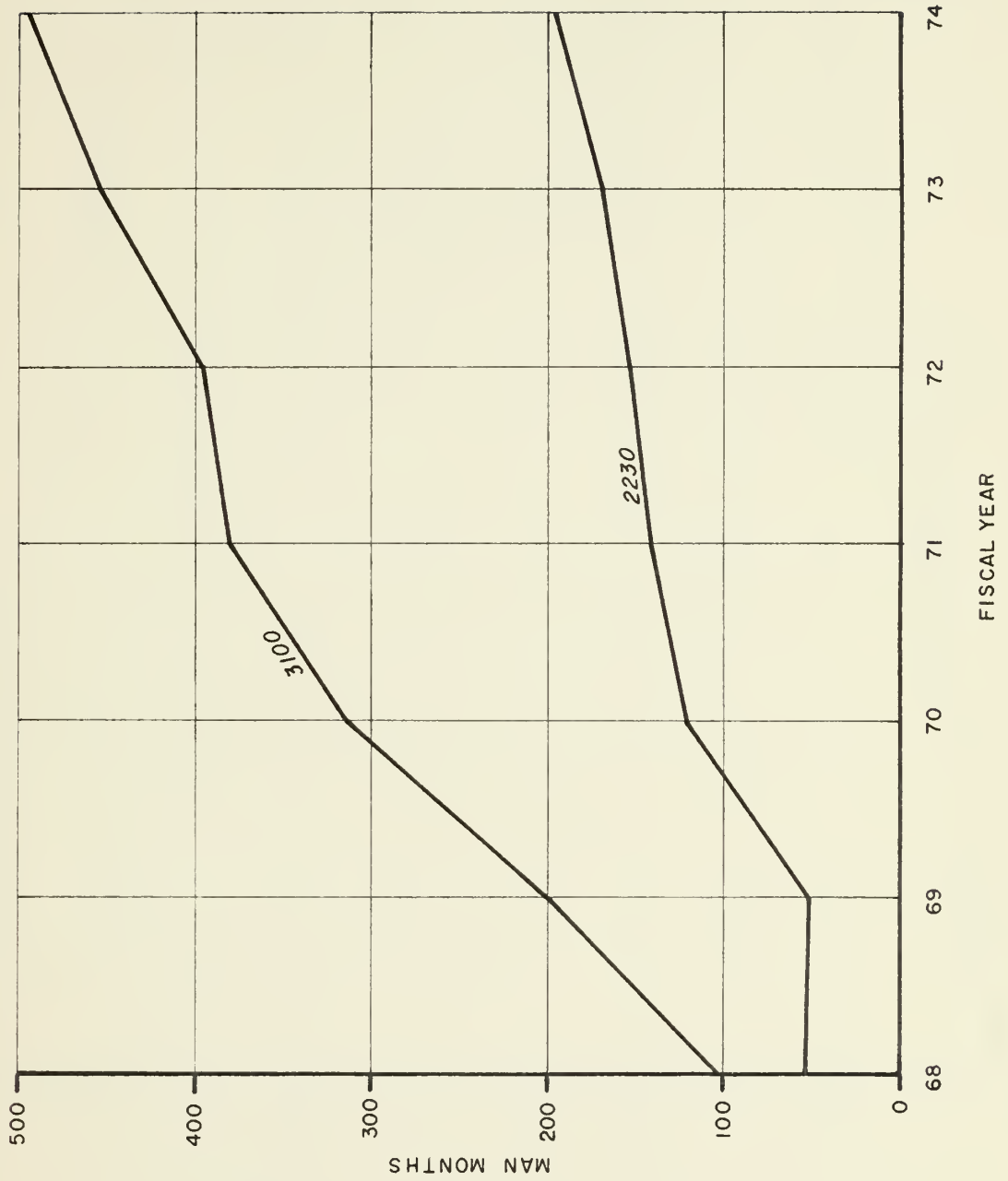
Adding all of the miles whether preventive or corrective indicates a total of 2,800 miles to be maintained by FY 1974.

The program advice, allocations for maintenance, in the past, have been at a fairly constant figure. The California AWP has then spread the funds allocated as thinly as possible. Quality must necessarily suffer. A description of "Mandatory Work" in another portion of the report will substantiate the contention that this sub-activity is, at present, under-funded for total maintenance requirements.

It can be concluded from the study that a significant increase in survey, design and construction of roads is needed to support Lands, Minerals, and Resources in California. A review of present procedures indicates that our AWP is crowding survey and design too close to construction. At the same time it appears that more man months need to be scheduled, per mile, for survey, design, administration-inspection, and staking for the quality desired. The same conclusion can be drawn when considering Road Maintenance and the quality desired.

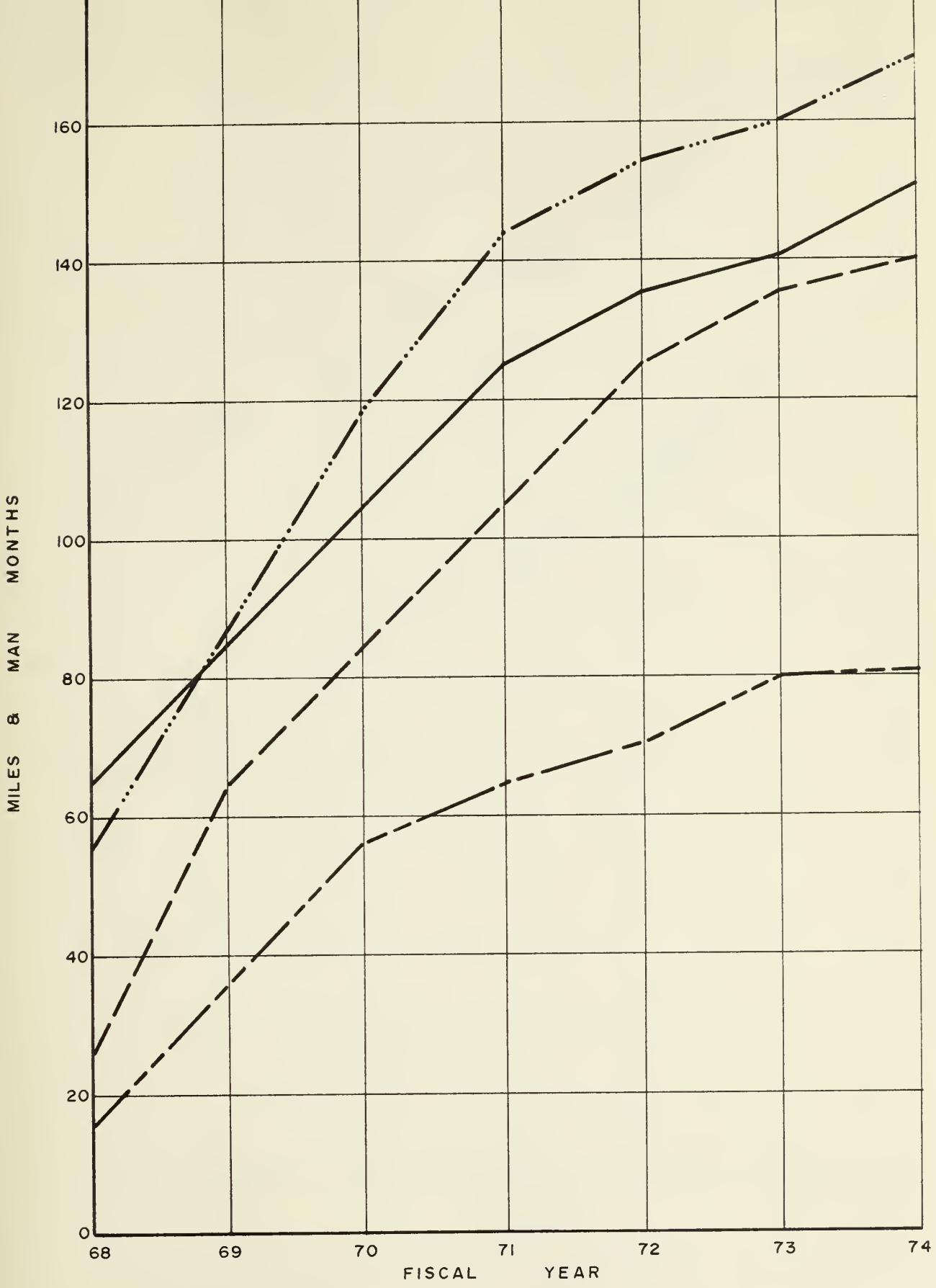
At present most of the design of roads is accomplished by the State Office, Design and Construction Branch. Recently, Engineering positions have been established in the Folsom and Redding Districts. These Engineers will assume more of this work load as training and fund allocations permit. It is anticipated that staffing in the other districts will also relieve the State Office of more of the survey and design responsibility after FY-70. Field staking and administration of contracts will be assumed by district staffing. Consequently, it is recommended that additional ceiling be authorized to include at least one Engineer in each district. It is recommended that Acquisition funds be made available (scheduled) the year after completion of survey and design, and one year prior to construction. It is also recommended that all easement acquisition be programmed under sub-activity 3100. A discussion of this recommendation may be found in the Easement section write-up.

Recognizing recruitment, training, and other problems it is apparent that A & E (Architect and Engineer) services may be required if we are to build lead time. More utilization of A & E services would, in essence, serve two useful purposes in the immediate future. First, it would cover the recruitment and training gap that is apparent; secondly, it would build a reservoir of talent within the State in the event of an accelerated program. Greater utilization of A & E services are recommended.



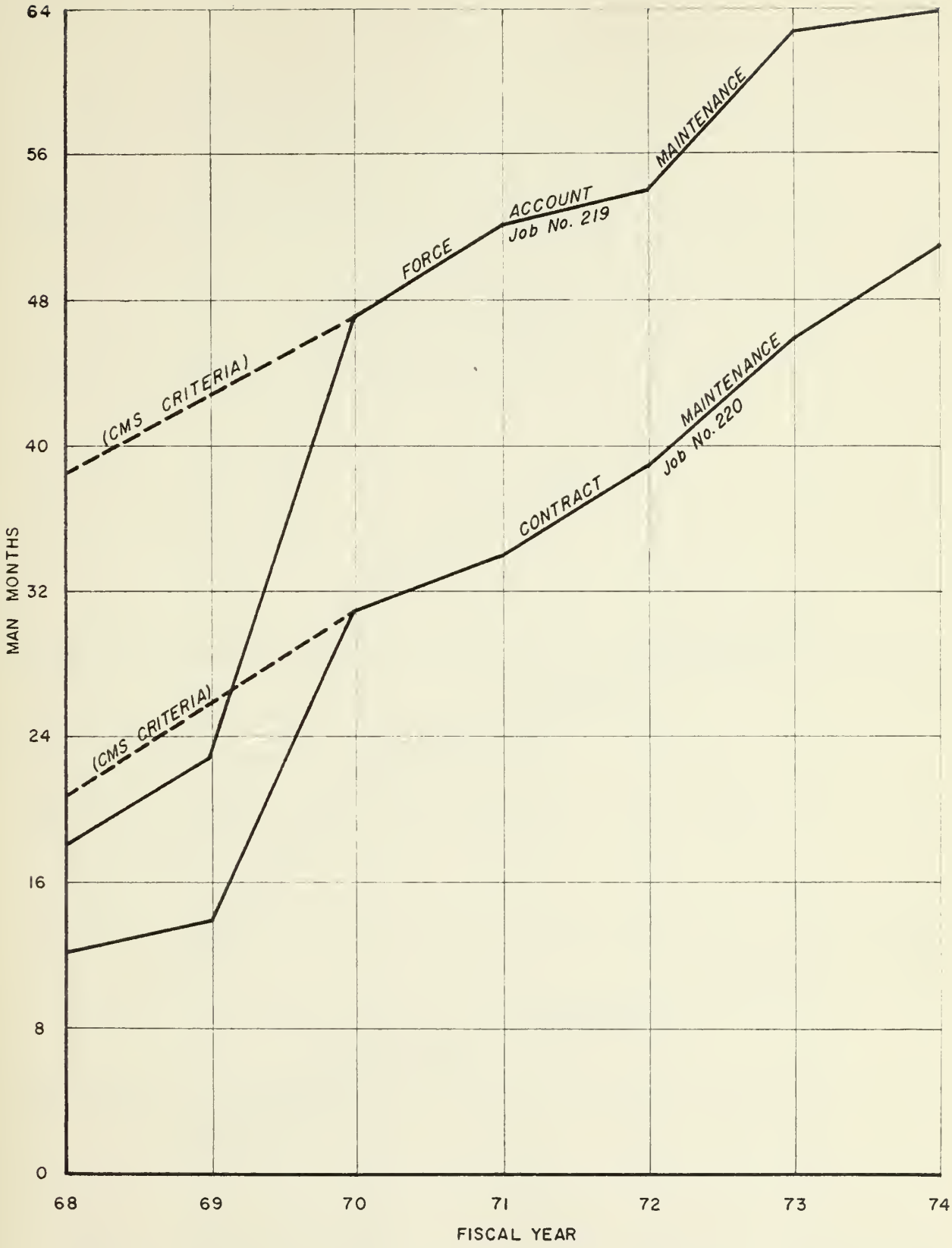
CALIFORNIA MANAGEMENT STUDY
ROADS PROGRAM
STATE TOTALS
CONSTRUCTION MAINTENANCE

CALIFORNIA MANAGEMENT STUDY
TOTAL WORK LOAD - MILES
ROAD CONSTRUCTION

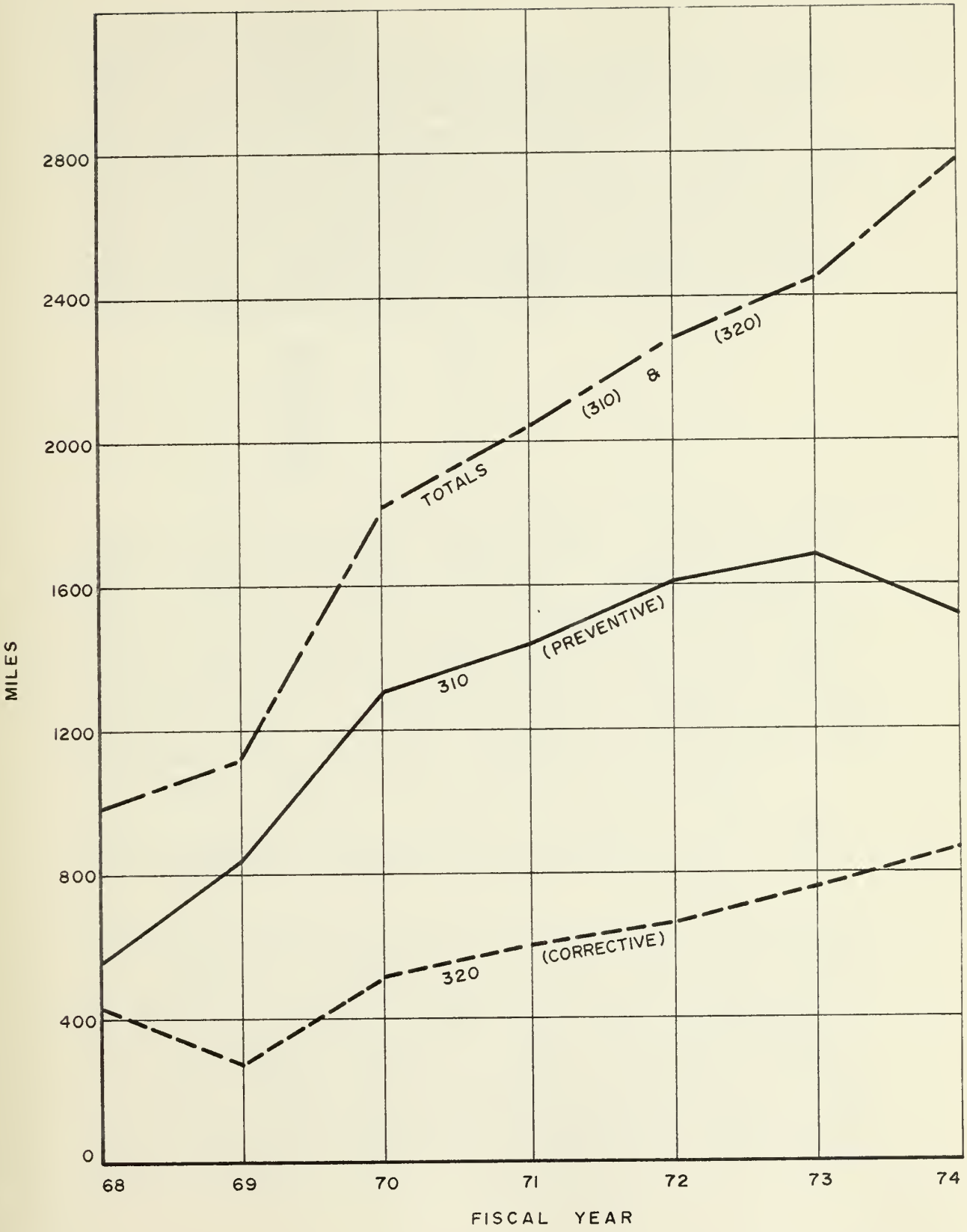


CALIFORNIA MANAGEMENT STUDY
ROADS PROGRAM

SURVEY & DESIGN & GRADING
STATE TOTALS — MILES & MM



CALIFORNIA MANAGEMENT STUDY
ROADS PROGRAM
STATE TOTALS — MM
MAINTENANCE



CALIFORNIA MANAGEMENT STUDY
ROADS PROGRAM
MAINTENANCE
STATE TOTALS-MILES

B. District Submissions

Management of resources by district dictate the need for road construction. Survey and Design allocations to districts in FY-68 limits the anticipated FY-69 construction program. At present, not all districts can be assured of receiving 3100 funds in any one fiscal year. This is not conducive to a consistent program; lead time and firm schedules are difficult. The chart entitled "District Differences--Construction" indicates the varying district submissions on proposed construction as extracted from the Management Study readouts. Scattered land patterns, and differing multiple use management are significant. The schedules indicated by the chart give the following percentages, proposed for construction:

0401	15 %
0402	15 %
0403	5 %
0404	22 %
0405	33 %
0406	21 %

It is of interest to note that even though the individual construction schedules vary considerably, the State Total as depicted by the chart entitled "State Totals" shows a fairly consistent curve from FY-70. However, it is suggested that the "peaks" and "valleys" appearing in some districts proposals require further study to determine if they are really necessary in support of other programs. A fairly smooth, consistent curve would lend itself to an easier staffing proposal. It is recognized that scheduling "all or none" of a particular road, or roads, could lead to the peaks and valleys. A consistent curve in a district proposal would then indicate "stage" construction of a road system. These "stages" would then be easier to program for funding as well as manpower requirements.

The maintenance schedules include 3100 constructed roads as well as those constructed by Timber Sale, and retained as "Multiple Use", plus those roads purchased in support of other programs.

The maintenance data submissions should be reviewed. Some confusion exists when trying to list miles to be maintained as "preventive" and "corrective". Any one mile could receive both efforts. Perhaps some percentage could be determined. For instance, 90% preventive, and 10% corrective. Even a system such as this would be difficult, because of district variances. It can be seen from the criteria established that more "corrective" effort is required in Ukiah than in Riverside because of the differences in soils and rainfall experience. Timber sale roads, 3100 roads, and others all may well have different maintenance problems due to climate, use, and soils differences. The graph entitled "Program Differences" shows by I(Data),

II(Operations), and III(Project Development) how these efforts vary by district. The Roads Program, of course, indicates a high percentage of III because it is a service function. The II(Operations) line compares the maintenance of roads as a major consideration.

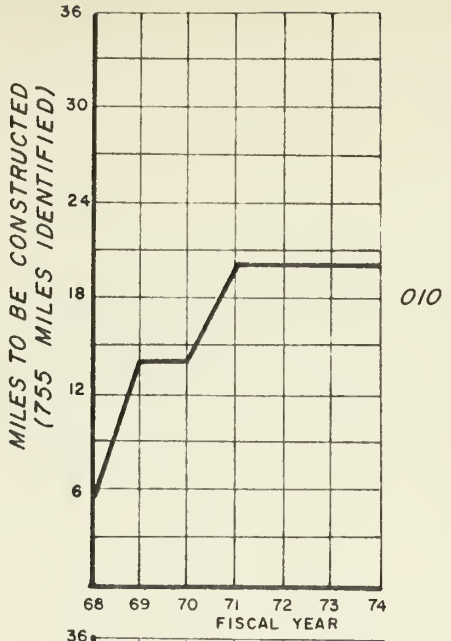
In summary, it is suggested:

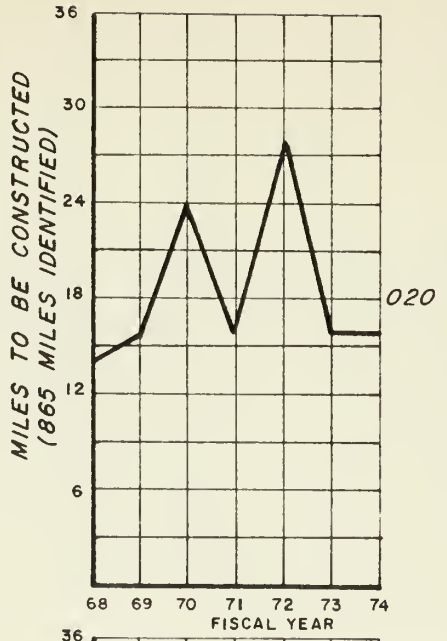
1. Re-evaluate the construction proposals in each district; see if curves can be smoothed by "stage" construction.

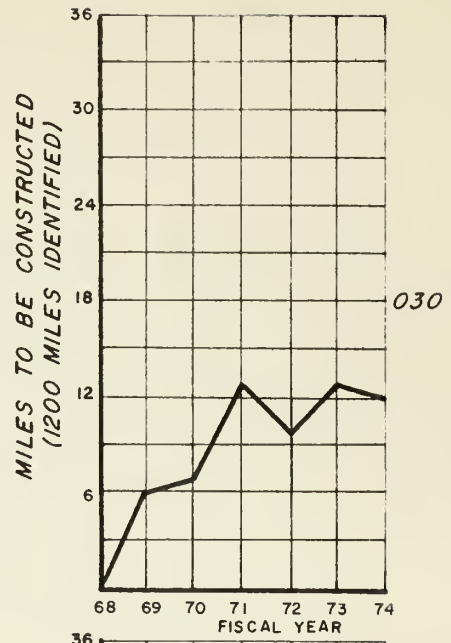
2. Determine if total maintenance requirements (miles) can be better defined by percentage "Corrective" and percentage "Preventive".

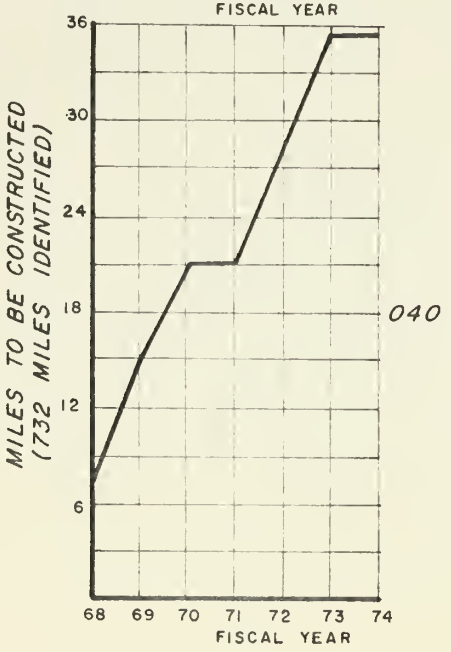
3. A better identification and analysis of our maintenance miles should be made to insure maximum benefits.

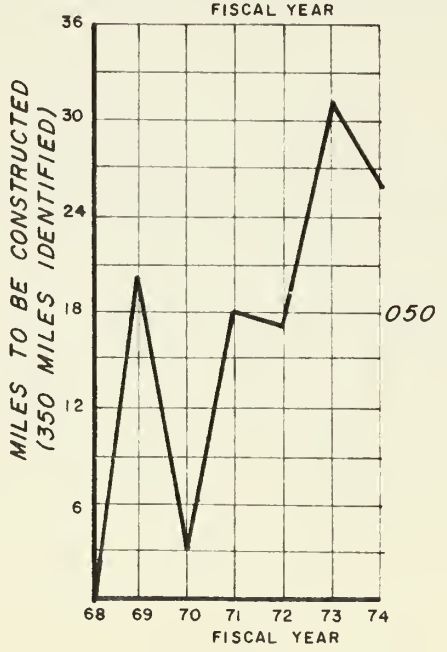
All of the above can be served by a detailed analysis of Transportation and Maintenance Plans and Unit Resource Analysis.

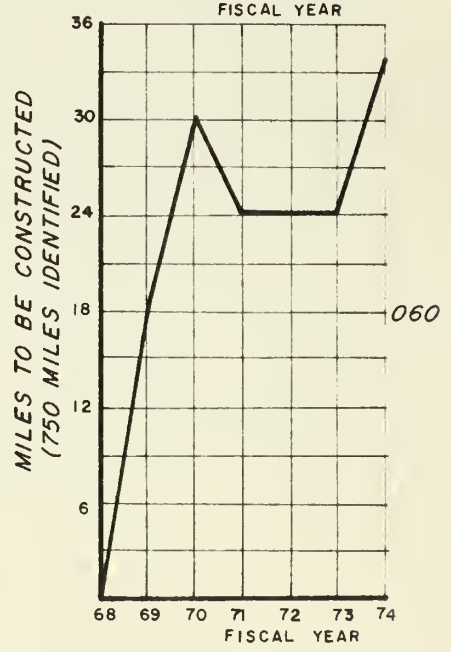

MILES TO BE CONSTRUCTED
(755 MILES IDENTIFIED)
010
36
30
24
18
12
6
68 69 70 71 72 73 74
FISCAL YEAR

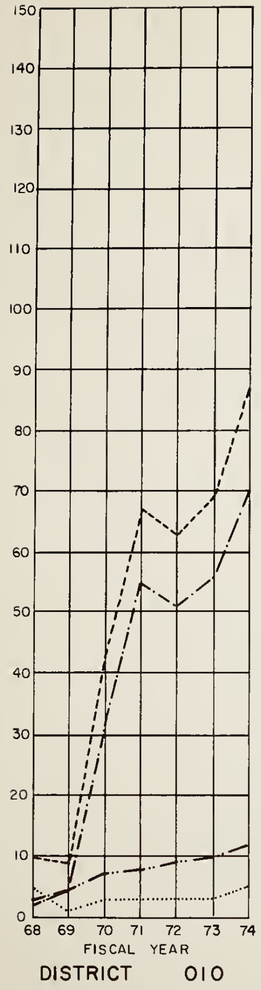

MILES TO BE CONSTRUCTED
(865 MILES IDENTIFIED)
020
36
30
24
18
12
6
68 69 70 71 72 73 74
FISCAL YEAR


MILES TO BE CONSTRUCTED
(1200 MILES IDENTIFIED)
030
36
30
24
18
12
6
68 69 70 71 72 73 74
FISCAL YEAR

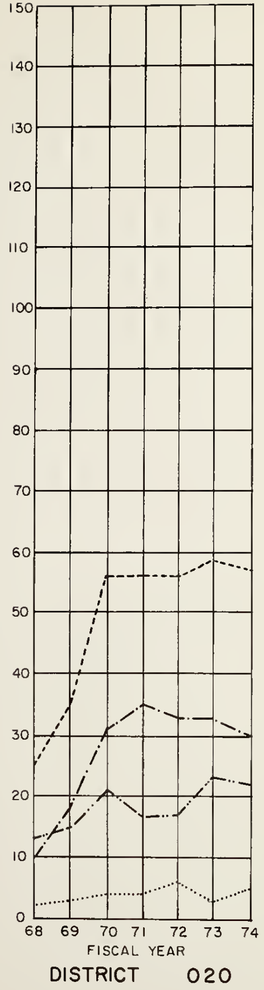

MILES TO BE CONSTRUCTED
(732 MILES IDENTIFIED)
040
36
30
24
18
12
6
68 69 70 71 72 73 74
FISCAL YEAR


MILES TO BE CONSTRUCTED
(350 MILES IDENTIFIED)
050
36
30
24
18
12
6
68 69 70 71 72 73 74
FISCAL YEAR

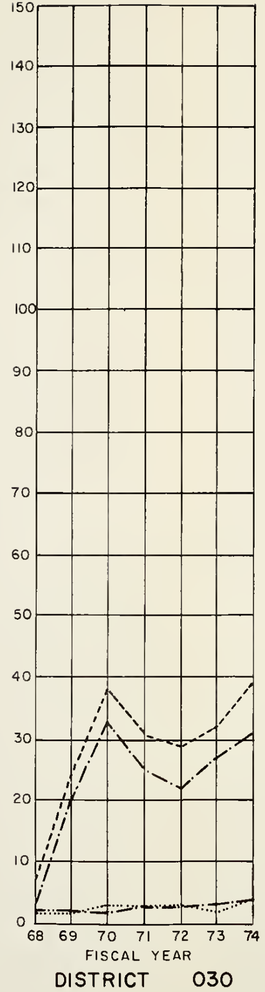

MILES TO BE CONSTRUCTED
(750 MILES IDENTIFIED)
060
36
30
24
18
12
6
68 69 70 71 72 73 74
FISCAL YEAR



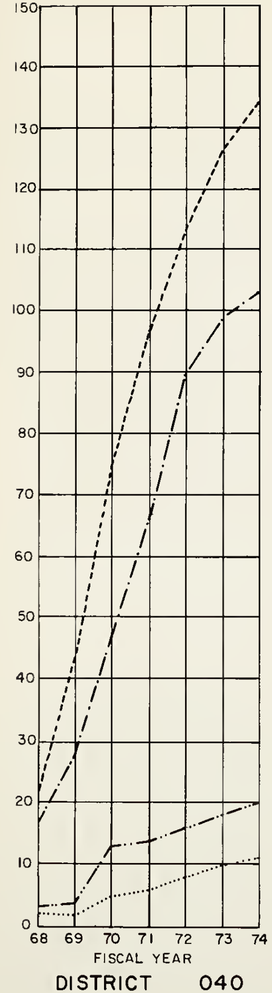
DISTRICT 010



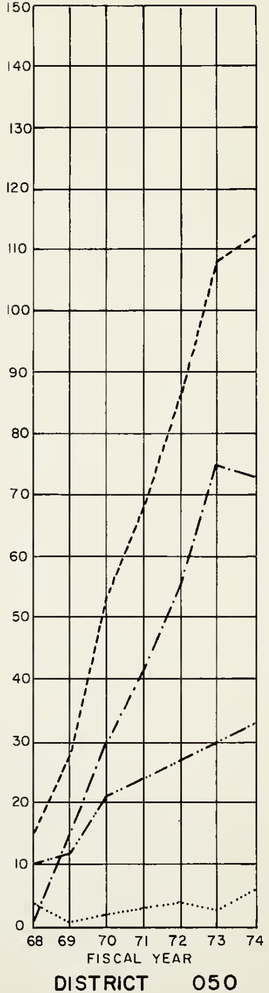
DISTRICT 020



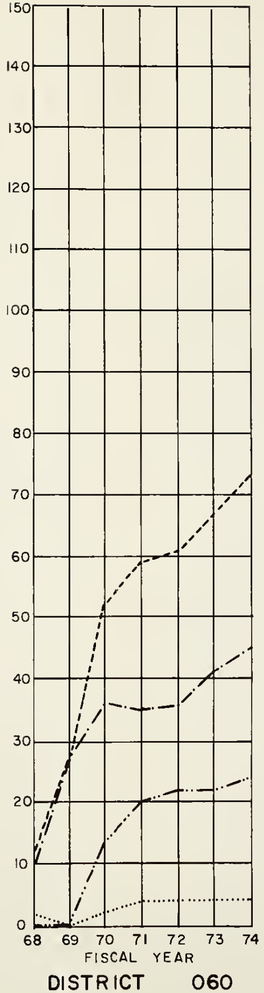
DISTRICT 030



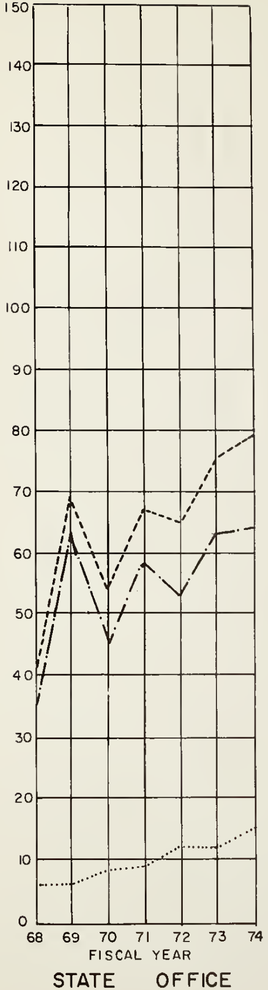
DISTRICT 040



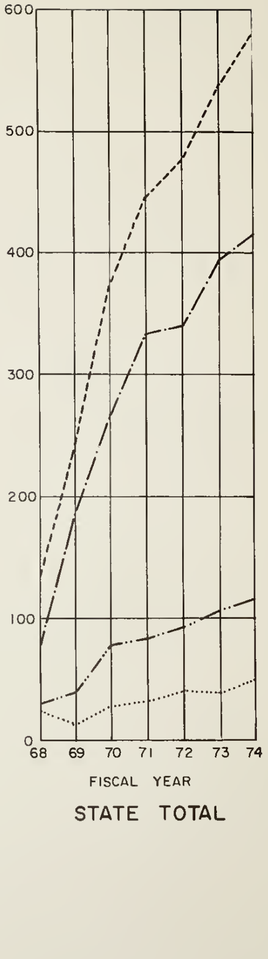
DISTRICT 050



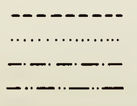
DISTRICT 060



STATE OFFICE



STATE TOTAL



CALIFORNIA MANAGEMENT STUOY
PROGRAM ANALYSIS
ROADS

Criteria - 2110

2110-120-2 — Administrative Support - Use present staff (FY 68) as an experience base from which to judge the amount of time that is to be expended in this job.

2110-120-164 — Clerical - This is the general clerical support necessary for the construction program. The normal ratio is about seven (7) professionals to one (1) clerical. For the purpose of this conversion, a professional will normally be at least a GS-9.

2110-150-3 — Programming - Planning - Includes time of operating and clerical personnel in the broad base programming and planning. The manpower for this function should reflect past experience.

2110-160-172 — Training - Technical - This item should include about 5% of the man months devoted to the survey, design, review and administration/inspection of construction contracts.

2110-160-4 — Safety - This item should include approximately 1% of both permanent and temporary man months assigned 2110 sub-activity.

2110-200-201 — Survey - This will be accomplished by district personnel based on an estimated contract cost (ECC). An experience factor of one percent (1%) is recommended. Example: If the building is estimated at a contract cost of $1,000,000 the man months the district must provide is to be calculated as follows:

$$MM = (ECC)\ (1\%)\ \div\ (\$1{,}000)$$
$$MM = (\$1{,}000{,}000)\ (0.01)\ \div\ (1{,}000) = 10$$
$$CR = \$1{,}000\ (\text{unit})\ \div\ 10\ MM = 100\ \text{units/MM}$$

The $1,000 is the total cost per month of a man of the capability required. (No S. O. input)

2110-200-202 — Design - This will be accomplished at the Denver Service Center. (No S. O. or D. O. input) Same as 2110-200-201.

2110-200-203 — Review - This will be accomplished at the State Office level based on 1% of ECC. (No D. O. input) Same as 2110-200-201.

2110-430-204 — Inspection - Administration - Construction Contract - The man month input is to be based on 2% of the ECC

for inspection and administration. (No S. O. input.)

MM = (ECC) (2%) ÷ $1,000
MM = ($1,000,000) (0.02) ÷ $1,000 = 20
CR = $1,000 (unit) ÷ 20 MM = 50 units/MM

2110-430-205 Layout - The project layout is to be accomplished by the district prior to award of the construction contract.

MM = (ECC) (1%) ÷ ($1,000) = 10
CR = $1,000 (unit) ÷ 10 MM = 100 units/MM

2110 General Comments - The $1,000 (unit) was used here to reflect the job in the same terms as the W. O. advices. The use of non-monetary unit such as square feet was too cumbersome for the purposes of this study. The program closely follows that as recommended in our past programs. However, it does not provide for area manager buildings, or for construction in any district that is on contract fire protection. Accordingly, the buildings needed in 030, 040, 050 and 060 will be provided through GSA. In addition, the Alabama Hill Complex is provided for under this sub-activity. It was a FY 69 Program Package.

2210-120-2 Administrative Support - (See 2110-120-2)

2210-120-164 Clerical - (See 2110-120-164)

2210-150-3 Programming - Planning - (See 2110-150-3)

2210-160-4 Safety - (See 2110-160-4) - In addition the S. O. will program 1 MM for the time of the Safety Officer.

2210-160-172 Training - Technical - (See 2110-160-172)

2210-200-211 Condition Survey & Work Plans - This job should reflect the time required to make detailed inspections and to formalize plans for the maintenance of buildings and related structures. The S. O. will program time to spot check and to aid in unusual problems.

2210-320-212 Force Account - Mtce - This job is the total man months including inspection and administration, necessary to accomplish a given task using force account labor. Normal maintenance costs, if all work was to be accomplished by contract would average about 1% of the estimated building and/or complex worth (EBW). The resulting ECC can then be proportioned between that to be accomplished by force account and that by formal contract. This percentage does not include expenditures in man months necessary to take care of depreciation or to do the janitorial work.

$$(ECC) = (EBW)\ (1\%\ ) = \$1{,}000\ (0.01) = 10$$

MM for force account = (ECC) (60 %) $\div$ 800 = 0.075, therefore, for each $1,333 of maintenance funds provided, one man month is needed. Conversion rate is 1 MM = 1 1/3 units.

2210-320-213 Insp. Adm/Mtce Contract - The inspection and administration of formal contract type maintenance is expected to require approximately 10% of the ECC. Accordingly, the conversion rate will be

$$MM = (ECC)\ (10\%\ ) \div (\$1{,}000) = 100$$
$$CR = \$1{,}000\ (\text{unit}) \div 100\ MM = 10\ \text{units/MM}$$

2210 General - Only districts 010 and 020 will be funded in this sub-activity, all other maintenance costs will be by GSA for GSA provided facilities. In addition facilities used entirely in support of the recreation will be funded in 2220.

2120-120-2 Administrative Support - (See 2110-120-2)

2120-120-164 Clerical - (See 2110-120-164)

2120-150-3 Programming - Planning - (See 2110-150-3)

2120-160-4 Safety - (See 2110-160-4) - In addition the S. O. will program 2 MM for Safety Officer time.

2120-160-172 Training - Technical - (See 2110-160-172)

2120-200-206 Survey - CR = $\frac{\$1{,}000}{MM} \div \frac{\$2{,}000}{\text{Family Unit}}$ (2%) = $\frac{25}{MM}$ units
(No S. O. input after FY 69)

2120-200-207 Design - CR = $\frac{\$1{,}000}{MM} \div \frac{\$2{,}000}{\text{Family Unit}}$ (4 %) = $\frac{12}{MM}$ units
This may be accomplished by either state or district personnel after FY 69. The S. O. will provide only that portion not funded by the D. O.'s. It is the intent that the D. O. develop this capability as soon as they can fund a complete man year of professional talent.

2120-200-208 Review - CR = $\frac{\$1{,}000}{MM} \div \frac{\$2{,}000}{\text{Family Unit}}$ (1 %) = $\frac{50}{MM}$ units
(No D. O. input)

2120-430-209 Inspection - Administration/Const. Contract - The inspection and contract administration costs are based on a percent of contract cost. This figure is $2\frac{1}{2}$% and is considered by most engineers the minimum necessary. It, however, is a reasonable figure to use for our type of construction under a $2,000 per family unit construction concept.
CR = $\frac{\$1{,}000}{MM} \div \frac{\$2{,}000}{\text{Family Unit}}$ ($2\frac{1}{2}$%) = $\frac{20}{MM}$ units
(No S. O. input)

2120-430-210 Layout - The layout of recreation site prior to contract award will be a D. O. responsibility after FY 69. An estimate of manpower requirements is as follows:
CR = $\frac{\$1{,}000}{MM} \div \frac{\$2{,}000}{\text{Family Unit}}$ (1 %) = $\frac{50}{MM}$ units

2120 General - The $2,000 per family unit cost reflects a higher quality construction than we have normally undertaken in the past, but is accounted for in the change from sanitation and protection concepts to the recreation concept. In projecting the future construction, the D. O.'s should consider current and potential usage and availability of adequate sites identified in present inventories.

CR = Conversion Rate

2220-120-2 Administrative Support - (See 2110-120-2)

2220-120-164 Clerical - (See 2110-120-164)

2220-150-3 Programming - Planning - (See 2110-150-3)

2220-160-4 Safety - (See 2110-160-4) - In addition the S. O. will program 1 MM for the time of the Safety Officer.

2220-160-172 Technical Training - (See 2110-160-172)

2220-200-211 Condition Survey & Work Plans - (See 2210-200-154 and modify to reflect the maintenance of facilities constructed under sub-activity 2120)

2220-310-214 Force Account - Operations - This job is the total man months including inspection and administration necessary to accomplish a given task using force account labor. Normal operation costs are anticipated to average about 1% of an average family unit cost of $2,000. This $200 per family unit includes all costs associated with the operation including salary, supplies, utilities and normal day to day maintenance.

In order to have the conversion rate reflect the problem inherent in operation of a small number of units, a sliding scale as follows was used:

1	-	50 units	=	4 MM
51	-	75 units	=	6 MM
76	-	100 units	=	8 MM
101	-	up	=	10 MM

2220-310-215 Inspection - Administration/Operations Contract - This job code is to be used in recording the inspection and administration of a formal operation type contract. In determining the ECC a base of $300 per family unit has been used. With an anticipated inspection and administration cost of approximately 10% the units per man month will be 33.

$$CR = \frac{\$1,000}{MM} \div \frac{\$300\ (10\%)}{\text{Family Unit}} = \frac{33 \text{ units}}{MM}$$

2220-320-216 Force Account - Mtce - This job includes work on an "as required" basis such as repairing of tables, fireplaces, etc.; accomplished by BLM personnel.

$$CR = \frac{\$800}{MM} \div \frac{\$200}{\text{Family Unit}} (57\%) = \frac{7}{MM} \text{ units}$$

Conversion Rate is 7 units per man month if all units were maintained each year. However, an assumption is made herein that the cycle rate will be 5 years. Accordingly (CR) = 35 units per man month.

2220-320-217 Adm. - Insp/Mtce Contract - This is the inspection and administration of a formal maintenance contract.

$$CR = \frac{\$1,000}{MM} \div \frac{\$300}{\text{Family Unit}} (10\%) = \frac{33}{MM} \text{ units}$$

Based on a 5 year cycle the conversion rate is:

MM = 5 (33) = 165 units

2220-330-218 Clean-up - This is the clean-up of undeveloped or potential site or view areas. It is assumed that this will be force account, and that 12 units can be accomplished each man month.

2230-120-2 Administrative Support - (See 2110-120-2)

2230-120-164 Clerical - (See 2110-120-164)

2230-150-3 Programming - Planning - (See 2110-150-3)

2230-160-172 Technical Training - (See 2110-160-172)

2230-160-4 Safety - (See 2110-160-4) - In addition, the S. O. will program 1 MM for the time of the Safety Officer.

2230-200-211 Condition Survey and Work Plans - (See 2210-200-154 and modify to reflect the maintenance of facilities constructed under activity 3100.)

2230-310-219 Force Account - Preventive Mtce - This is the time expended in keeping the road from deteriorating as defined in BLM Manual 9113.75A. Due to the large number of roads that may need only very limited, if any, preventive maintenance and due to the physical differences in the districts a varied cycle rate is established.

$$CR = \frac{\$800}{MM} \div \frac{\$200}{Mile} (0.4) = \frac{10 \text{ units}}{MM}$$

The 40 %is an estimate of labor costs involved in the $200 figure. Accordingly, 1 MM is needed for each 10 miles, based on a one year cycle. However, this is usable only for Ukiah. The rate for Riverside is (10) (4) = 40 and for the other districts the CR is 30.

2230-310-220 Insp. - Adm/Prev. Contract - $CR = \frac{\$1,000}{MM} \div \frac{\$200}{Mile} (0.2) = \frac{25 \text{ units}}{MM}$

This job again requires the multiplication of the number of exact units (25) by the cycle. Accordingly, 010 is 75, 020 is 75, 030 is 75, 040 is 75, 050 is 25, and 060 is 100.

2230-320-219 Force Account - Corrective Mtce - No cycle has been established in this job activity, since the conditions vary with type of road, climate, local soil conditions and other variables. Accordingly, the district must analyze each and every facet to determine the number of miles that will require corrective maintenance. The 5 miles per man month used herein reflects the additional work normally required above the preventive maintenance criteria.

$$CR = \frac{\$800}{MM} \div \frac{\$400}{Mile} (40\ \%) = \frac{5 \text{ units}}{MM}$$

2230-320-220

Insp. - Adm/Contract Mtce - This is used only with formal contract award and covers the inspection and administration of the contract.

$$CR = \frac{\$1,000}{MM} \div \frac{\$400}{Mile} (10\%) = \frac{25}{MM} \text{ units}$$

It has no cycle involved but does require a judgement figure as did job 2230-320-156.

2230

General - The road maintenance and construction program in general sets standards of accomplishment that are normal with construction and maintenance type organizations and departure from these standards has only been taken when the experience factor has dictated otherwise.

3100-120-2 Administrative Support - (See 2110-120-2)

3100-120-164 Clerical - (See 2110-120-164)

3100-150-3 Programming - Planning - (See 2110-150-3)

3100-160-172 Technical Training - (See 2110-160-172)

3100-160-4 Safety - (See 2110-160- 4) - In addition the S. O. will program 2 MM for the time of the Safety Officer.

3100-200-301 Survey - This work element is for the survey of roads (grading and surfacing) and trails. The use of a single conversion rate is justified on the basis that the accuracy is within that of the basic cost per mile assumptions. (No S. O. input)

$$CR = \frac{\$1,000}{MM} \div \frac{\$15,000}{Mile} (3\%) = \frac{2}{MM} \text{ units}$$

3100-200-302 Design - This job is to reflect the formalization of rough data into plans, specifications and estimates. A CR = 2 reflects a 3% charge. This job will be accomplished without state office support by FY 70.

3100-200-303 Review - This is final review of the formal contract. (No D. O. input)

$$CR = \frac{\$1,000}{MM} \div \frac{\$15,000}{Mile} (1\%) = \frac{7}{MM} \text{ units}$$

3100-310-50 Access - Easement Acquisition - An estimate of 2 cases per man month is to be used for this type of work.

3100-411-304 Insp - Adm/Road Grading Contract - This is to reflect the inspection and administration of the road construction contracts.

$$CR = \frac{\$1,000}{MM} \div \frac{\$15,000}{Mile} (2\%) = \frac{3}{MM} \text{ units}$$

(D. O. input only)

3100-411-305 Staking - This is the field staking of the road prior to contract award. It is based on percentage less that 2.

$$CR = 4 \text{ miles per man month} = \frac{4}{MM} \text{ units}$$

(D. O. input only)

3100-412-304 Insp - Adm/Road Surfacing - This is the inspection and administration of a road surfacing contract valued at an average of $6,000/mile.

$$CR = \frac{\$1,000}{MM} \div \frac{\$6,000}{Mile} (3\%) = \frac{5}{MM} \text{ units}$$

(D. O. input only)

3100-412-305 Staking - This is the field staking of the road prior to surfacing.

$$CR = \frac{\$1{,}000}{MM} \div \frac{\$6{,}000}{Mile} (1\ \%) = \frac{16}{MM} \text{ units}$$

(D. O. input only)

3100-420-306 Insp Adm/Bridge - This job should include the inspection and administration of the construction contract. The conversion rate is 30 units per man month. This amounts to approximately 3 % of the ECC.

3100-420-307 Layout - Bridge - This is the physical layout necessary in order to provide the construction contract with preliminary control. It is about 1 % and the CR is 100 units per man month.

3100 General - The manpower portion of this study is based on the assumption that the roads reflected as needs will cost approximately $15,000 per mile to grade, and $6,000 per mile to surface. Bridge cost is averaged at $100,000 for ECC. Should the design criteria be revised, or if individual roads or bridges studied, these values could be in error by several times. Accordingly, the tasks involved in each individual work category have been refined to reflect short term work accomplishments.

CALIFORNIA MANAGEMENT STUDY

ACCESS
(Easement Acquisition)

A. General Highlights

The California Management Study has revealed that the BLM, in California, will in the future need to acquire a total of 2,290 permanent easements to provide legal access for multiple use purposes to the public domain lands under its jurisdiction. (See Chart "Work Load Total Easements). The study also shows that if acquisition is undertaken at the rate planned by the districts in this study (See Rate of Easement Acquisition Graph) BLM will be able to provide legal access to substantially all the public domain lands in a 15 to 20 year period. If we can reach the acquisition rate shown by the study, we will have acquired about 750 easements by the end of 1974.

We recognize that the 2290 easement figure is an estimate; however it is not without supporting data. Earlier this fiscal year (1968) we undertook the task of identifying and inventorying the most urgent access needs in California. In this inventory we identified 805 easements which are needed to provide access to the public domain lands lying primarily in the Type I and Type II retention areas. We feel that the 805 easement figure shown by our inventory supports the 2,290 figure revealed in the managment study for the total state access acquisition job if we are to provide access to all public domain land. It is very possible that a vigorous exchange program to block up scattered public domain lands, could substantially reduce these easement needs. However, such a program would require substantial staffing in other activities.

Pressures to provide not only legal but physical access to the public land is rapidly increasing in California. Public demand to use public lands primarily for outdoor recreation of all kinds will continue to increase greatly as California's population explosion continues. This demand will also become more insistent as our citizens "discover" that there are millions of acres of public land outside the national forests and parks available for recreation.

At the present time, our right-of-way easement acquisition program is so inadequate that our road construction projects and timber sales are constantly being delayed due to our inability to acquire the needed easements. This is due primarily to inadequate or lack of long range road construction plans and advance timber sale plans. To date we also have not had the personnel or funds to get a real easement acquisition program

moving. We now need to emphasize planning and survey and design work two years in advance of construction so we can acquire needed easements during the fiscal year prior to scheduled construction. We are now barely meeting the easement needs for a very modest road construction and timber sale program, with almost no acquisitions being made for non-mandatory recreational access.

We feel that legal access to the public lands is basic and essential to our whole land management program. It is recommended that we gear up and program to acquire the necessary easements at the rate planned by this study. The rate of easement acquisition graph shows a planned rate of acquisition of about 160 easements per year by 1974. This is a realistic rate; however, the study indicates a rather high man month per case ratio. As our study continues and as field personnel gain experience in easement acquisition activities, we should be able to increase our cases per man month.

We recommend that our present system of programming for road easement acquisition be modified. At the present time, the only MLR Activity which recognizes access in programming is the 1240 Forest Management Program (and of course the O&C Grant Land Programs). The other traditional management activities have no code numbers or program numbers which permit the programming for this fundamental need. The 3100 Program is supposed to cover all the needs of access for all purposes, with the exception of some roads built under timber sales. However, the 3100 funding has not covered the manpower needs for the planning and other preliminaries leading up to the actual project construction. Because of its separate appropriation, this activity is more vulnerable to cuts by the Congress, as has been proved by past experience. Therefore, the other activities such as 1210 (Recreation), 1220, 1260 and 1270 should have some means whereby access needs in the planning stage, can be programmed. At the point in time when a determination is made that a road is needed for a given use or combination of uses in a given location, the 3100 funds should be utilized. This ordinarily would be at the commencement of survey and design, which is needed not only for the project construction, but earlier for the easement acquisition. From that point forward, the funding should be covered by the 3100 Activity, including manpower, actual easement purchase and related costs.

In California, the Easement Acquisition Staff is in Resource Program Management and we believe this is the proper location.

Close coordination with the service function, engineering, has been carried on and we see no problems, so long as the demarcation between planning and survey and design is clearly drawn as to when 3100 funding should commence.

This study information will be very helpful to us for future programming for manpower and funds to accomplish the easement acquisition job.

ACCESS
(Easement Acquisition)

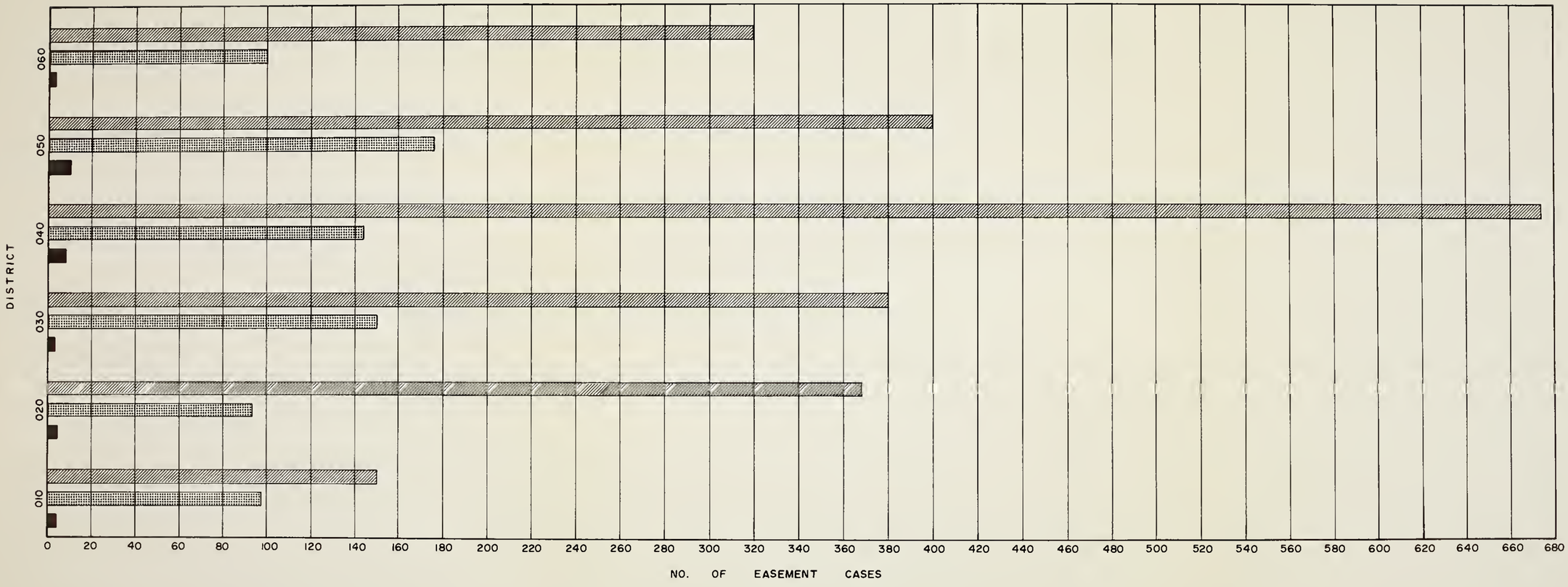
B. District Analysis

The district's estimate of the total access easement acquisition job seems to be quite reasonable. Folsom shows 670 cases which appears high compared to Ukiah and Redding. However, Folsom has a very fragmented land pattern and could very probably have 670 easement needs if its land pattern remains unchanged.

There seems to be an error in Susanville's number of easement cases as they seem to have doubled up on cases in Activity 1220 and 1240.

The rates of acquisition which the districts show appear reasonable and could be accomplished if funds were made available. It is impossible to ascertain if the districts will meet all their access needs with their planned rate of acquisition. We can only assume that they will acquire all the easements needed to meet their total resource management programs.

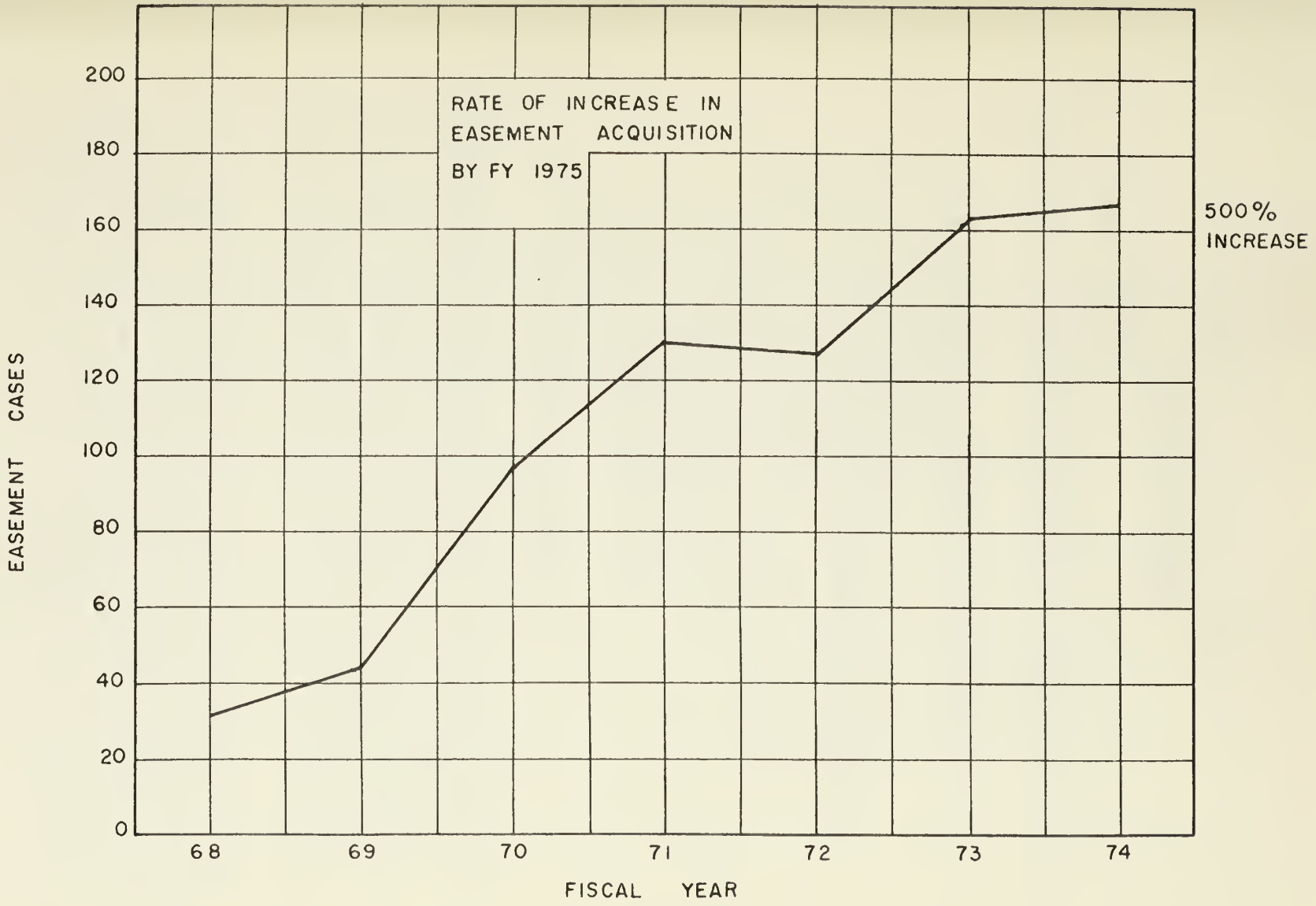
The southern California districts show a lesser easement need than the northern California districts. This is due to the land pattern being much more fragmented in northern California. Thus our emphasis on easement acquisition will be greater in the northern California districts.



LEGEND

TOTAL NO. OF EASEMENTS NEEDED
NO. OF EASEMENTS ACQUIRED BY END OF F.Y. 1974
NO. OF EASEMENTS ACQUIRED BY END OF F.Y. 1968

CALIFORNIA MANAGEMENT STUDY
WORK LOAD TOTAL
EASEMENTS



CALIFORNIA MANAGEMENT STUDY

RATE OF EASEMENT ACQUISITION

CALIFORNIA MANAGEMENT STUDY

PROGRAM DEVELOPMENT

A. General Highlights

The functions of the Program Development activity in California include the coordination, development and review of the following jobs:

a. Initial Analysis - (Annual Review and Updating)
b. State Economic Profile
c. District Summaries
d. District Program Guides
e. Unit Resource Analysis (Initial Development)
f. Unit Resource Analysis Review (Review and Updating)
g. Pilot District Studies
h. District Land Use Guides
i. Impact Studies (Water and Land Use Projects)
j. River Basin Studies
k. Water Project Development Planning
l. Water Project Compliance
m. Program Planning (Coordination)
n. Annual Waok Plan (Coordination)
o. Budget (Coordination)
p. Progress Reports
q. Cost Accounting & Time Report
r. Automatic Data Processing Analysis

Program and Work Plan Directives - At present the general program directives only provide for meeting the time schedule for completing Unit Resource Analysis for Type I and II Planning Units, meeting the Impact Study demands of the Federal and State water construction agencies, and maintenance of the other components of the Bureau's planning and program system (i.e. Econ-Profile, District Summary, Pilot District Studies, Unit Resource Analysis Review and Updating). River Basin Planning is also included within the W.O. Directives.

The program directives for jobs "m" through "o" are found in the Bureau Manual. All of the above Jobs with the exception of jobs "p" through "r" are currently handled by California's State Office Program Development section. The addition of the Jobs "p" through "r", as well as others expected to come under the Program Development activity will come under the activity in 1970. The accomplishment and quality of these jobs, however, will be reflected by the availability and limitation of manpower and funds necessary to do these jobs.

1. Total Work - The total manpower requirements to accomplish the above jobs from 1968 - 1974 are shown on the Program Analysis Graph. In 1968, the manpower required to support all of the above jobs is 309 man-months or 25.9 man-years. (Includes State, Land and District Offices.) The manpower requirements will exceed 500 man-months in 1970. The sharp increase in 1970 is primarily due to W.O. requirements to complete Unit Resource Analysis for the Type I and Type II Planning Units by 1970. The manpower build-up in 1970, however, should decrease to 435 man-months in 1974, unless subsequent workload demands for developing land use plans require more manpower than anticipated at this time.

Of the above listed jobs, Unit Resource Analysis and Impact Studies utilize the bulk of the manpower within the Program Development activity. The combined MLR input necessary to accomplish URA work programmed in 1968 is 109 man-months vs. 212 man-months in 1970, as shown in the URA Development Review and Maintenance Graph. From an activity standpoint (1290-171), the man-month input in these years for URA work is 28 man-months and 34 man-months, respectively. The 1968 Annual Work Plan Directives stated that quality would not be sacrificed for quantity in the preparation of Unit Resource Analysis. California's districts are doing a quality job in developing URA inventories, but the job is nearly insurmountable within the present manpower ceiling when weighed against the other programs that compete for these same man-months. The 1970 manpower estimates illustrate the additional man-months that are needed if the W. O. Unit Resource Analysis Program Directives are to be met.

With regard to Impact Studies, BLM in California is currently doing work which is 10 years behind its "sister" Federal agencies and the California State agencies involved in water development planning. The California Water Plan of 1957, has evolved into a State water development program involving the following Federal and State agencies: Corps of Army Engineers, Bureau of Reclamation, Soil Conservation Service and State Department of Water Resources. The activities of these agencies will require an estimated 75 water related impact survey reports by BLM between 1968 and 1974. Commitments to these construction agencies in 1968 are to complete 15 studies. At a rate of three man-months per study, including State Office review time, 45 man-months are required. As shown in the Impact Study graph, manpower constraints have limited this work to 22 man-months in 1968 versus a projected 88 man-months in 1974. If Impact Studies are to be developed for major interstate and freeway type highways, gas and oil pipelines high voltage transmission lines (such as the Pacific Northwest-Southwest Interties), and other specialized forms of land use projects (e.g. Federal Power Commission Licenses and Re-Licenses), the projected man-month requirements for Impact Studies in California should well exceed 100 man-months annually.

In accordance with Part 1734 of the Bureau Manual, Impact Study Reports are prepared for water projects planned for construction by

the various Federal and State agencies. In California these agencies include the Bureau of Reclamation, Corps of Army Engineers, Soil Conservation Service (i.e. P.L. 566 - Small Watershed Projects) and the State of California Department of Water Resources. Preparation of Impact Reports constitute a mandatory job or workload pursuant to the above cited authority. These reports identify the public lands and reservoirs involved. They inventory (1) the impact that proposed water projects will have on BLM land and resource management programs, and (2) the effect that continuing programs may have on the economic feasibility of developing a water project (i.e. reservoir).

Aside from the inventory of impacts that will affect BLM lands and resource programs, the reports identify project expenditures needed to replace BLM facilities, and to reimburse BLM for cadastral surveys and mining claim examinations.

Pursuant to P.L. 89-72, and the Classification and Multiple Use Act, BLM Impact Reports identify the recreation potential of proposed reservoirs. The opportunity exists for BLM to manage the recreation facilities at many of the reservoirs to be constructed under the California State Water Plan of 1957. Because of the location of many of these projects on or adjacent to public domain lands, the San Francisco Region, Bureau of Outdoor Recreation, has recommended that BLM manage several projects throughout the State.

In order for BLM to meet these responsibilities, a recreation policy directive must be developed by the Washington Office.

River Basin Planning in California on behalf of BLM is just getting underway. Primary input into River Basin Planning will be by the State Office River Basin Team which is on a reimbursable job arrangement through the Bureau of Reclamation. California's district manpower input should not exceed 2-3 man-months per district per year through 1971. At this level of input, the district total would approximate 12 man-months per year versus 40 man-months per year by the River Basin team and State Office Economist which was established by the W. O. AWP Directive. Forty man-months at the State Office level is insufficient and is eight man-months short of the estimated needs of this work. These man-months are needed to properly reflect the time that will be required of State Staff personnel such as Land Office Status Clerks, the State Soil & Watershed Specialist, Recreation Resource Planner, and others who will be required to assist the River Basin Planners in the collection and/or interpretation of data required for the Framework Study.

Conclusions and Recommendations - The manpower requirements to accomplish the Washington and California State Office objectives for the Program Development activity are inadequate to accomplish the jobs within the time schedule established. Statewide, Unit Resource Analysis is deficient by a total of 117 man-months in all of the MLR activities.

Impact Studies, currently programmed and funded at 22 months in 1968 is deficient 23 man-months. Because of the magnitude of the Impact Study workload in California, funding entirely within the 1290 activity is considered inadequate. Impact Studies are generally prepared by more than one person at the district level and discuss all of the resources. It is therefore recommended that all of the MLR activities identify Impact Studies within either an existing Work Category Code, or that present Work Category Code Definitions be expanded to cover these type studies.

River Basin Planning should be expanded to include BLM District Offices inasmuch as they will provide much of the raw data that will be used for the Type I Framework Studies.

The Type I Framework Study is expected to be followed by detailed watershed planning studies which should result in water projects being identified for future development. Expansion of River Basin work should eventually provide for the compliance and/or project liaison work necessary to BLM in California. Projects already identified through BLM - Impact Studies will of necessity require a close degree of coordination on behalf of BLM to insure that protective recommendations, stipulations, etc., are complied with. Because of the location of the projects already identified for construction and the future projects, the compliance or liaison effort should be handled at the District level with coordination in the State Office.

Because of the increasing magnitude of the Program Development activity, it seems logical that the jobs within this activity be grouped by the nature of the jobs to be done. The jobs related to water development planning (i.e. River Basin Studies) should be separated from the area of general land use planning. The jobs in financial management should also be separate sub-functions within the Program Development activity.

B. District Workload Differences

Workload differences shown in the Program Development graphs (Program Analysis, Impact Studies, and Unit Resource Analysis) reflect the workload differences in each district. Some of these differences are due in part to the following:

1. The number of water projects in Northern California will require more Impact Study work by the Folsom, Redding and Ukiah Districts than the other three districts.

2. Riverside District will require more man-months to complete URA for its planning units versus Susanville or Ukiah due to the size and number of planning units per district.

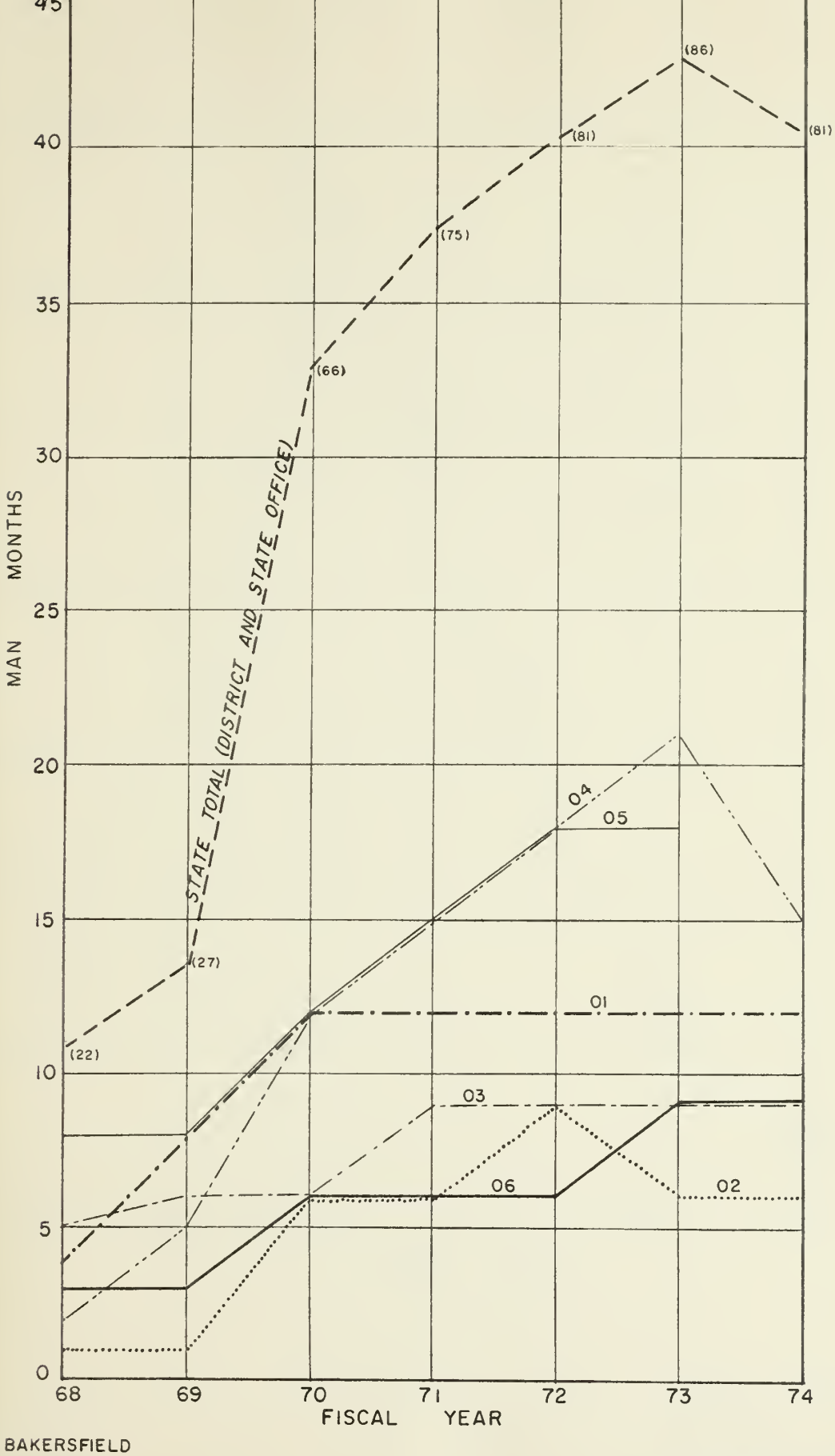
3. Programming and planning efforts per district differ according to size and the type of district programs found in each district.

4. The maintenance and updating of inventories (URA) compiled within the Program Development activity or jobs within this program vary from district to district.

Also reflected in Workload differences depicted by the Program Analysis graph are the Managerial support and interests given to the jobs within Program Development.

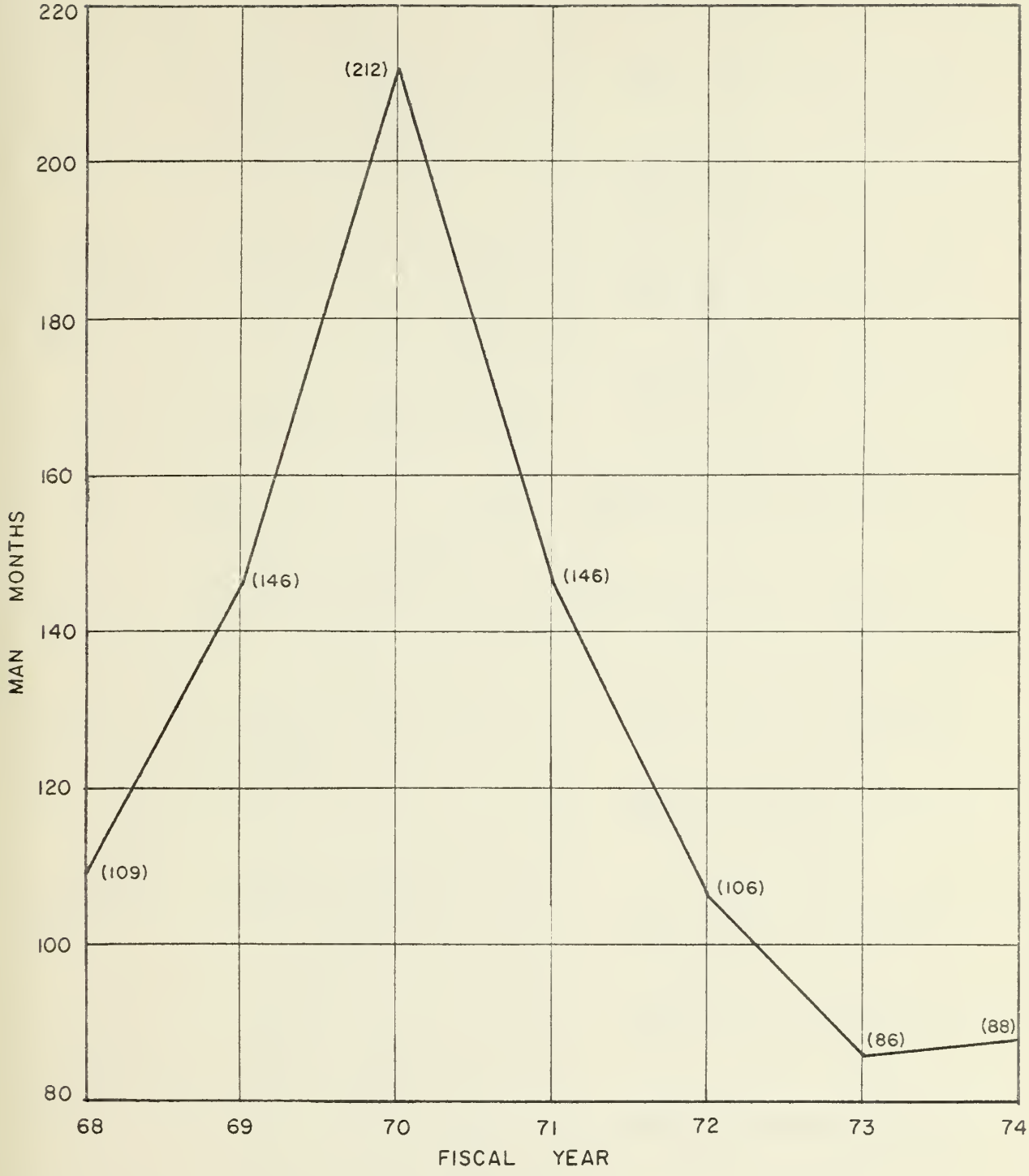
Analysis of the individual districts show that the Redding, Ukiah, and Riverside Districts will not complete Unit Resource Analysis by 1970 as required by the Washington Office Directives. This is due primarily to the lack of man-months within all of the MLR activities.

The extension of URA work into 1973 and 1974 by the Redding and Ukiah districts is logical when a more balanced program is maintained. It is also logical to extend this work in these districts since Redding has all Type II and Type IV Planning Units and Ukiah has only three Type I Planning Units which are scheduled for completion in 1970.

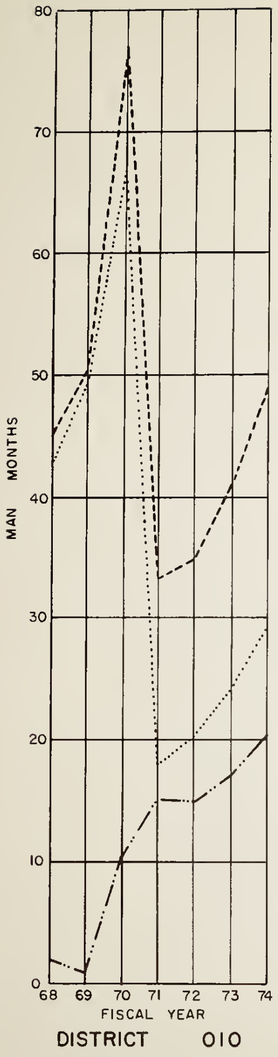


01 - BAKERSFIELD
02 - SUSANVILLE
03 - REDDING
04 - FOLSOM
05 - UKIAH
06 - RIVERSIDE

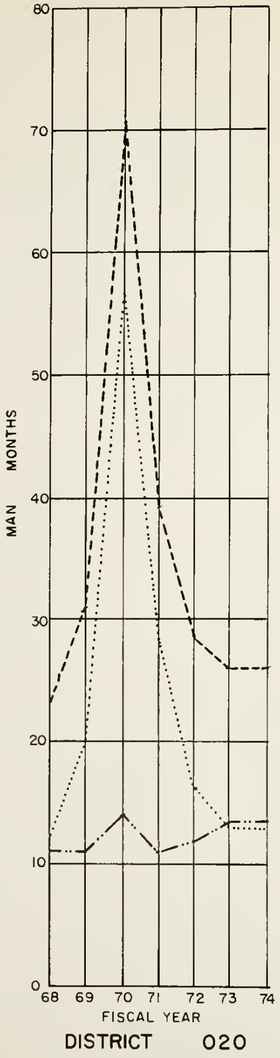
CALIFORNIA MANAGEMENT STUDY
PROGRAM DEVELOPMENT
IMPACT STUDIES



CALIFORNIA MANAGEMENT STUDY
UNIT RESOURCE ANALYSIS
DEVELOPMENT - REVIEW & MAINTENANCE
JOBS 33 & 128 - ALL ACTIVITIES



DISTRICT 010



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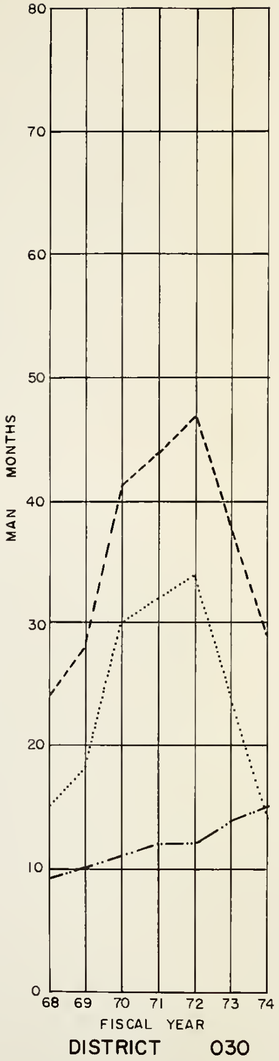

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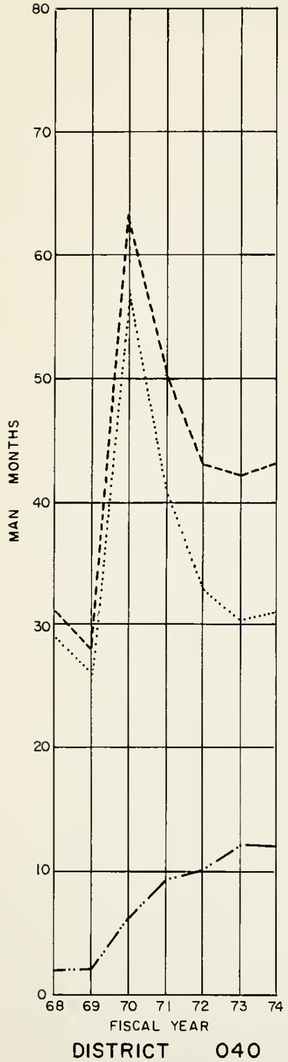
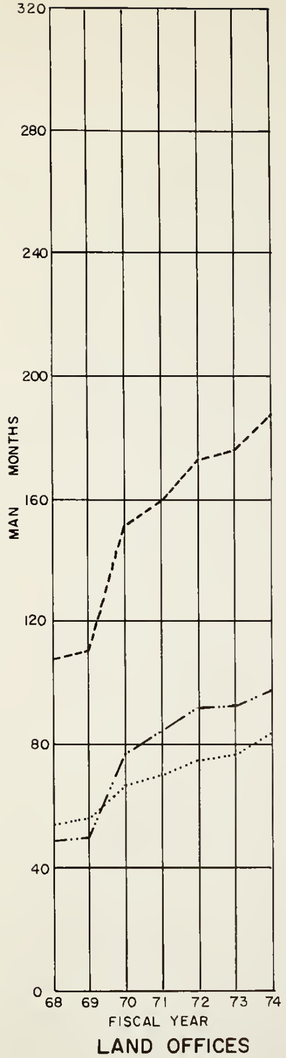


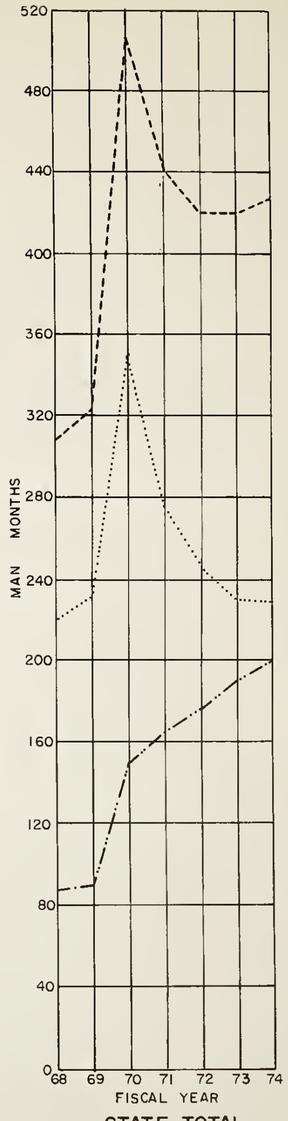
DISTRICT 040

DISTRICT 050

DISTRICT 060



LAND OFFICES
& STATE OFFICE



STATE TOTAL

TOTAL

RESOURCE DATA

PROJECT DEVELOPMENT (NONE)

OPERATIONS

CALIFORNIA MANAGEMENT STUDY
PROGRAM ANALYSIS
PROGRAM DEVELOPMENT

GENERAL SUPPORT PROGRAM

PART A

GENERAL HIGHLIGHTS

The General Support program is primarily operational in nature and the job unit measurement is expressed in man months. The jobs covered by this program are as follows:

Job No.	Title
1	Management
2	Administrative Support
4	Safety
5	Training
10	Job Corps
11	Records Services
12	Information Services
13	Status
164	Clerical Support for Technical Activities
180	Reproduction Services
29	Public and Cooperative Relations
132	Cadastral Survey Records
133	Cadastral Microfilming
162	General Cartographic
172	Technical Training

and the jobs related to building construction and building maintenance.

Administration and Clerical Support being a major consideration in this program, guidelines were set for determining the rate of staffing increase for this kind of personnel. The rate suggested was 15% of the technical and professional personnel.

WORKLOAD TOTALS:

General Support: The overall General Support Program shows an increase from 1299 man months in 1968 to 2782 man months in 1974. Please refer to the accompanying graph labeled "Program Analysis - General Support" for a comparison of Districts and other offices.

Management, Administrative and Clerical: Jobs 1, 2 and 164 representing management, administrative, and clerical support of technical activities are illustrated by the chart entitled "Management - Clerical Relationships". This shows the total management job increasing from 196 man months in 1968 to 407 in 1974, and the administrative and clerical functions increasing from 755 man months in 1968 to 1528 in 1974.

Training: Jobs numbered 5 for administrative training, 118 for fire training, and 172 for technical training have been plotted together on the accompanying graph as a single line labeled "Training". The graph

is labeled "Information, Education and Training". The present training workload statewide is 85 man months and is expected to increase to 310 man months by 1974.

Information and Education: Information and Education is a service function in support of all programs in the Bureau of Land Management. Five jobs were included in the I & E analysis which is shown on the accompanying graphs labeled "Information, Education and Training". The jobs are:

Job No.	Title
11	Record Services
12	Information Services
13	Status
29	Public and Cooperative Relations
113	Fire Education

The workload in the I & E function statewide is shown in the study to increase from 230 man months in 1968 to 430 man months in 1974. Jobs 11, 12 and 13 are essentially over-the-counter functions connected with lands and minerals and make up a large part of the existing workload and are not scheduled to increase as much as other jobs. Job 29 is the broader information and education program and this study reflects a threefold increase from 1968 to 1974.

Cartography: The directives received in this activity in general express the role of PSC, wherein they are to do the basic series map work. Accordingly, our work would be restricted to special maps, construction drawings funded by those activities, cadastral plats, reimbursable mineral surveys (7200) and other related types of drafting output. The workload totals in cartography reflect the needs as expressed by the Resource Program Management, Lands and Minerals, and Engineering Divisions. These needs were reduced to man months using a type of unit that in many cases did not lend itself to an easy conversion. The workload increase from 92 man months to 254 man months appears logical in light of the increased emphasis in cadastral. This activity represents approximately 2½% of the total projected manpower needs of which 1% of the total is cadastral. This is the same percentage as now exists in the 1968 AWP.

Building Construction and Building Maintenance: Building construction reflects administrative offices, fire guard stations, lookouts, warehouse, etc., associated with an administrative complex and is included in the General Support Program. The forecasted program reflects the needs of two districts: Bakersfield and Susanville. The workload statistics show only 1 man month programmed in 1968 increasing to a peak of 34 man months in 1972. The increase results from anticipated program for the Alabama Hills complex in the Bakersfield District.

SPECIAL PROBLEMS

Administrative and Clerical Support: This study has illustrated that the present time coding system does not provide adequate codes to cover the clerical support required in support of technical activities. At present much of the time which should probably be coded to a sub-activity is coded to the District Program Services Activity 1290 for lack of a clearly defined work code. The same would apply to time spent in staff meetings, training sessions and safety meetings.

Another problem is the requirement of reporting the regular time spent by permanent personnel fighting fires to Activity 1290. This is an item that cannot be programmed with any accuracy and so often results in great distortions in the district programs.

Training: The State Office functions as the coordination point and decisive authority on all training matters within the State, but there is no training officer as such employed by the State Office.

Information and Education: The Management Study does recognize and attempt to quantify the information and education function. We have some basic facts to go on. In the future, it will be possible to develop better ways to measure demand and output, but there is also a job to be done now. The Bureau of Land Management must become more efficient and capable of meeting the overwhelming demand from the public for information about their lands. As this is done, and specifically included in the framework of the organization, it will be possible to measure and predict more accurately.

CONCLUSIONS AND RECOMMENDATIONS

Considering the conditions of the Management Study which provided that there would be a lifting of restrictions on programming for the manpower to get the job done, it is quite apparent that the General Support category needs to be increased. The study indicates that much more emphasis is needed in training, information and education, safety, and the clerical support of the technical activities.

If the various technical programs are realistic, it would not appear that the General Support Program is out of line.

GENERAL SUPPORT PROGRAM

PART B

WORKLOAD DIFFERENCES

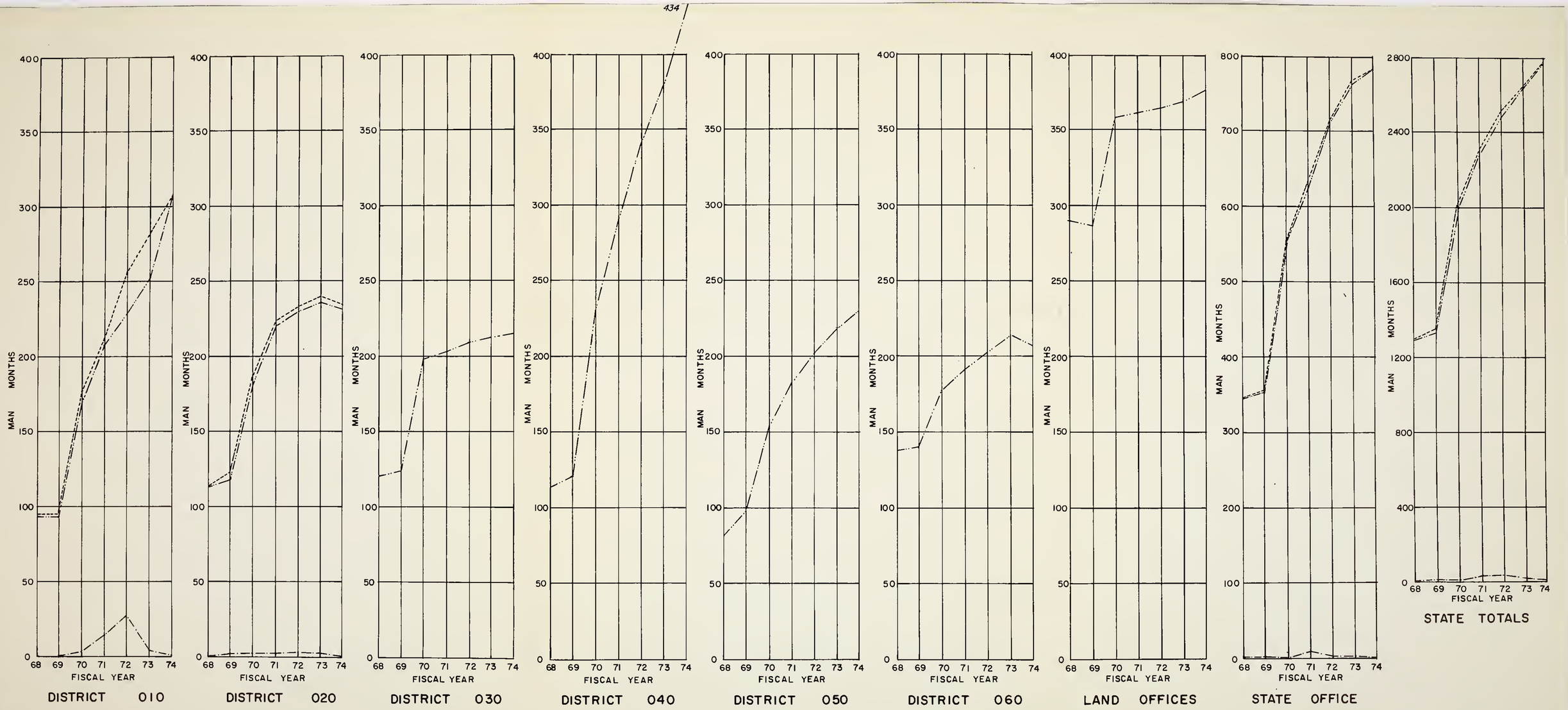
Overall, the percentage increase in workload totals for this program are about the same as for the entire California Management Study. However, the Bakersfield and Folsom Districts show a much greater increase than do the other Districts. This is due largely to the fact that much greater emphasis is being placed on the Information and Education, Training, and Safety Requirements. Other workload differences will be discussed below by specific functions.

Administrative Support & Clerical Support of Technical Activities: The Riverside District shows little or no increase in these two jobs. An analysis of the printouts shows 23 man months in the 1260 Activity Job 164 in 1968 and 1969 with a decrease to 12 man months in 1970 and subsequent years. The 12 man months programmed would seem to be more realistic. All other districts show a steady increase of man months requirements in Jobs 2 and 164 and are in line with the suggested guidelines.

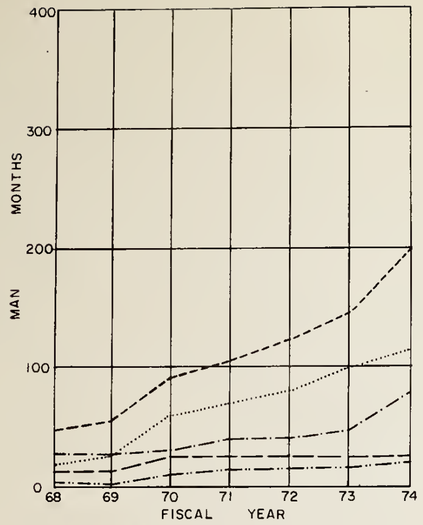
Training: The overall increase in training is programmed to increase from 85 man months in 1968 to 310 man months in 1974. It is interesting to note that the Land Offices and State Office only increased training from 24 man months in 1968 to 57 man months in 1974. This would seem to support the recognition by the Districts of the heavy training load they carry with new professional employees who need a major training program if they are to function as efficient BLM employees. There are two districts who show a really great jump in training from 1969 to 1970: Susanville and Bakersfield. This difference is almost entirely due to fire training and reflects their concern with that activity.

Information and Education: There are two reasons for workload differences shown by this study in various California offices for this function. It was difficult for many offices to come up with figures on the time required for this kind of work because the criteria were not clear and specific and because of the lack of past experience.

There is another, and much more significant, difference. The workload is definitely related to population pressure. Riverside, Folsom and Bakersfield show this demand clearly. The Riverside Land Office shows an understanding of the increases that will be needed to copy with public pressures in the coming years. This probably reflects the pressures they have received operating close to the tremendous Southern California Metropolitan area.



CALIFORNIA MANAGEMENT STUDY
PROGRAM ANALYSIS
GENERAL SUPPORT



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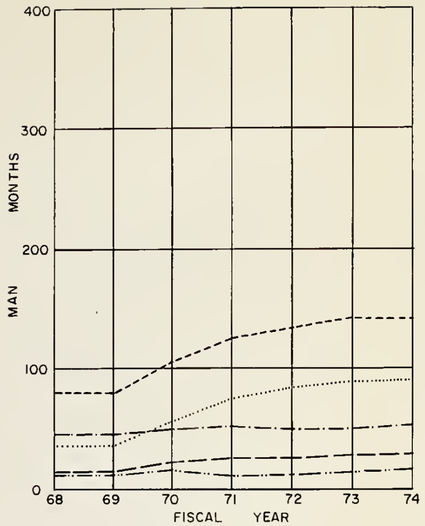

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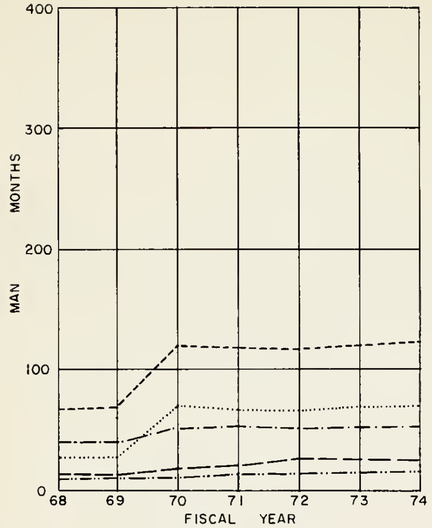

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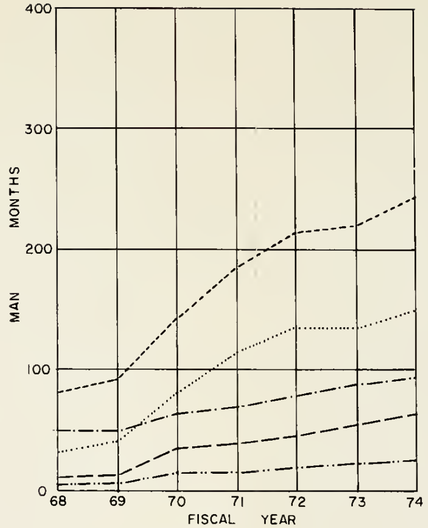

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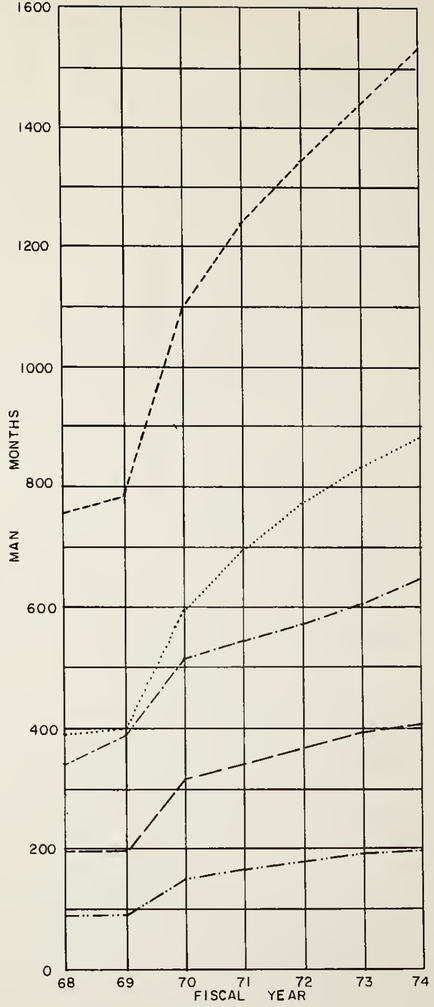
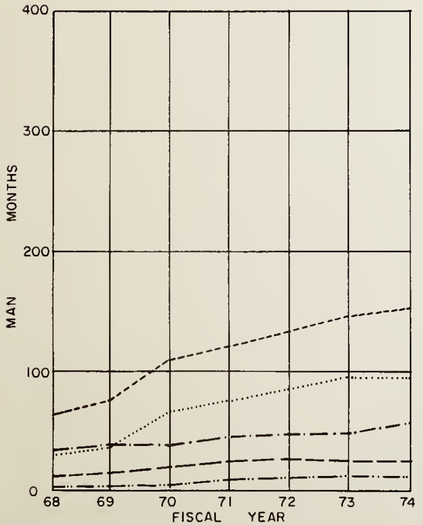


STATE TOTAL



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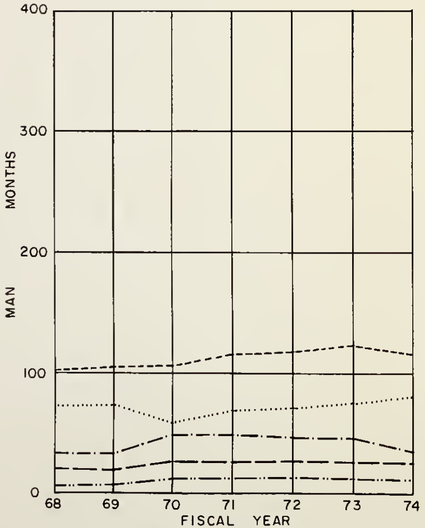

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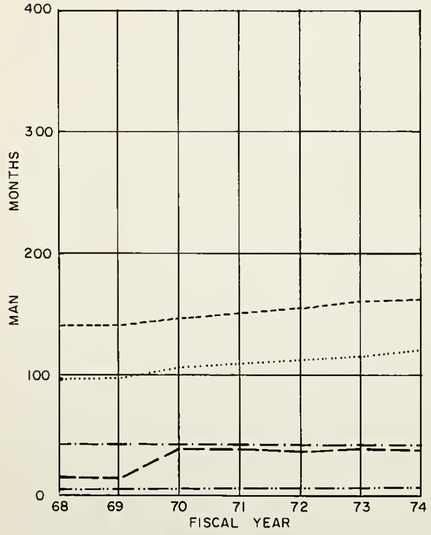

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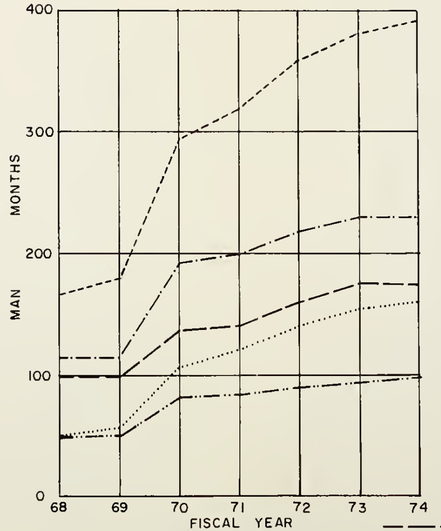
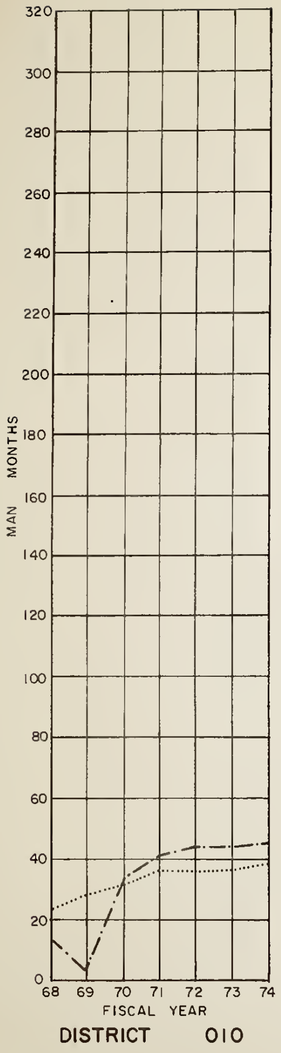


STATE OFFICE

MANAGEMENT
ADM. SUPPORT
CLERICAL SUPPORT OF TECH. ACTIVITIES
TOTAL CLERICAL SUPPORT
PROGRAMMING & PLANNING

CALIFORNIA MANAGEMENT STUDY
MANAGEMENT — CLERICAL RELATIONSHIP
GENERAL SUPPORT



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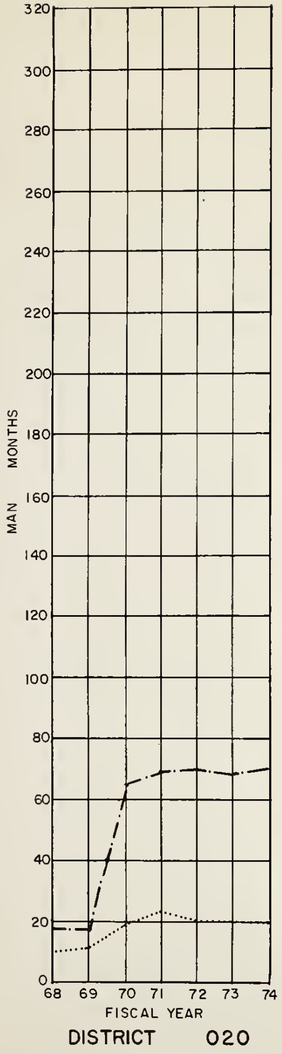

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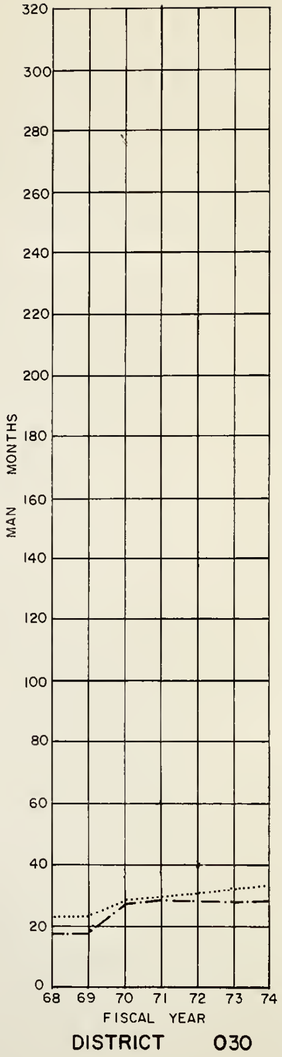

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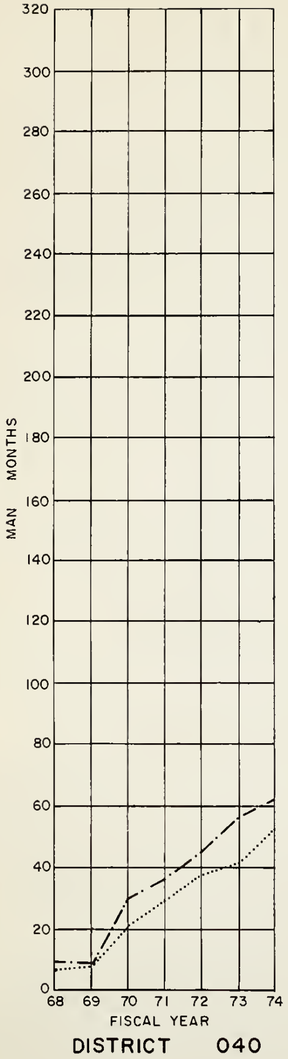

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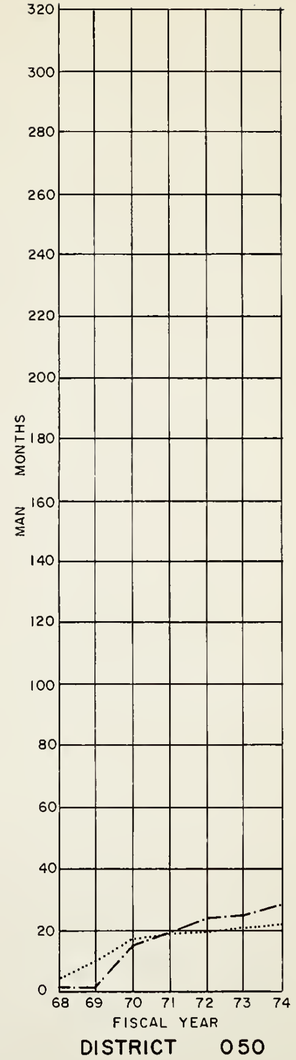

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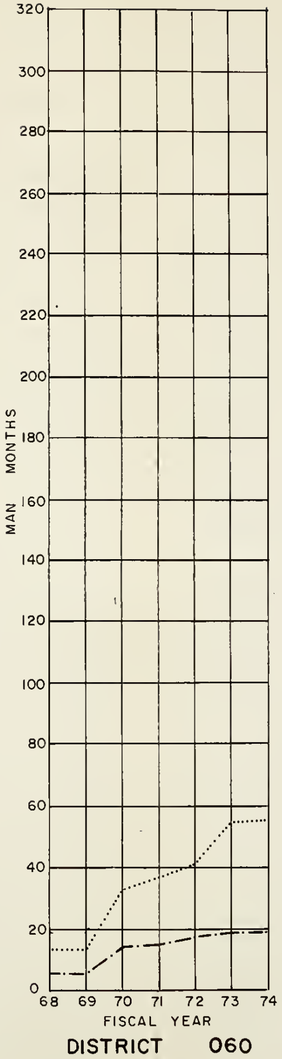

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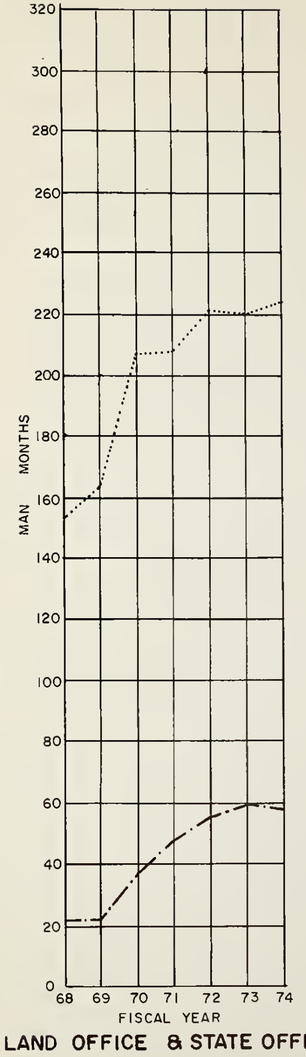
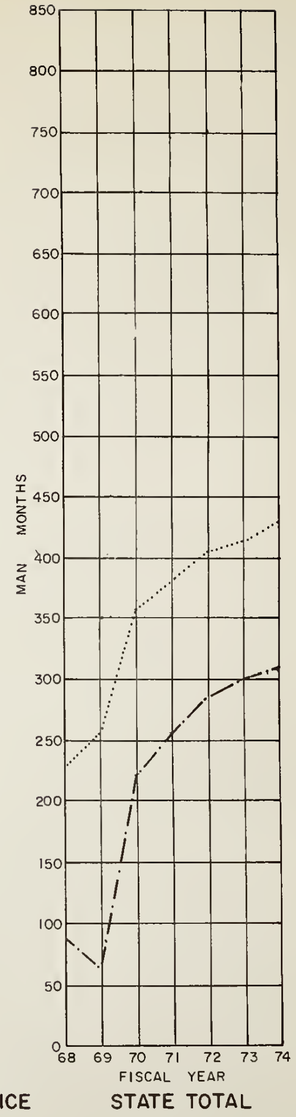


LAND OFFICE & STATE OFFICE



STATE TOTAL

CALIFORNIA MANAGEMENT STUDY
WORKLOAD ANALYSIS

..... INFORMATION & EDUCATION
—·—·— TRAINING

INFORMATION
EDUCATION
TRAINING